KYAMBOGO UNIVERSITY

FACULTY OF ENGINEERING

DEPARTMENT OF CIVIL AND BUILDING ENGINEERING

ASSESSMENT OF THE CHALLENGES AND EFFECTS OF DELAYS IN COMPULSORY LAND ACQUISITION ON THE PERFORMANCE OF ROAD CONSTRUCTION PROJECTS IN UGANDA

BY

ELONG SAMUEL

BSc. LE (Hons) _ KyU

17/U/14621/GMET/PE

A RESEARCH DISSERTATION SUBMITTED TO KYAMBOGO UNIVERSITY GRADUATE SCHOOL IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF SCIENCE IN CONSTRUCTION TECHNOLOGY AND MANAGEMENT OF KYAMBOGO UNIVERSITY

NOVEMBER 2020

APPROVAL

The undersigned approve that they have read and hereby recommend for submission to Kyambogo University a dissertation entitled: **"Assessment of the challenges and effects of delays in compulsory land acquisition on the performance of road construction projects in Uganda"**, in fulfilment of the requirements for the award of a degree of Master of Science in Construction Technology and Management of Kyambogo University.

Signature: ……... Date: …….

DR. LAWRENCE MUHWEZI

Signature: ……... Date: …….

MR. JOSEPH ACAI

DECLARATION

I, Elong Samuel, do hereby declare that this dissertation is my original work and has not been submitted previously to this or any other institution of higher learning for any degree. Any errors and omissions encountered in this dissertation shall be attributed to me.

Signature: …… Date: …….

ELONG SAMUEL

ACKNOWLEDGEMENT

One would ask; what really would be the best way to say “thank you” when there are hundreds to thank? Surely, this report is a “thank you” to you my beloved wife for the love, the kindness, the care and the financial support you have rendered to me during my endeavours; you are a wonderful wife!

Yet still, the people most directly responsible for making this report becoming a reality include; Dear Lord God the Almighty for the most precious gift of life He has given to me, my supervisors Lawrence Muhwezi (PhD) and Mr. Acai Joseph, my best friends Ambrose Abura, Mabonga Sylivia Namakoye, Samuel Ojur, Kenneth Edam, Daniel Oucu, Goodman Duncan Ogwali, Nanyulya Kevin, all my Course mates, All my lectures, work mates at UNRA, ISU for the professional guides and practices issues ...and all those not mentioned, thank you and may the good Lord guide and reward and protect you all.

DEDICATION

This dissertation is dedicated to the two women of my life; my beloved wife Peace Christine Elong and ever supporting mother Amolo C'Dina who has given in all her life towards the peace and security of this country. Women; may the good Lord bless you abundantly. I love you all!

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

AfDB	African Development Bank
Cap.	Chapter
CAO	Chief Administrative Officer
DC	District Commissioner
FAO	Food and Agricultural Organisation
FGDs	Focussed Group Discussions
Fig.	Figure
ISU	Institution of Surveyors of Uganda
RII	Relative Importance Index
PAPs	Project Affected Persons
UNRA	Uganda National Roads Authority

LIST OF APPENDICES

ABSTRACT

The roads construction projects in Uganda are experiencing delays which are partly due to challenges in land acquisition. The purpose of this study was to assess the challenges and effects of delays in land acquisition on the performance of Uganda's roads construction projects, a case of Mbale-Bumbobi-Bubulo-Lwakhakha. Eighteen (18) land acquisition processes, twenty-nine (29) challenges and eighteen (18) feasible strategies were identified through comprehensive literature reviews drawn from land acquisition practices in various countries. Data was collected using questionnaire surveys, structured interviews, and focused discussion guides. Surveys were carried out across the study population composed of valuers, surveyors, sociologists, and PAPs. The collected study data were coded and analysed using SPSS 25.0 and their magnitudes determined using Relative Importance Index (RII). The various processes were evaluated, and the least significant processes were recommended for removal. The study revealed that the top three most significant challenges identified were; (1) delayed compensation awards, (2) injurious affections and other damages, and (3) access difficulties for some families. The RII for the various strategies in mitigating challenges in land acquisition were computed and (1) the need for regular involvement and dialoguing with the stakeholders and the affected persons, (2) a proper definition of what constitute fair and adequate compensation and (3) dialoguing with the affected persons to allow civil works progress especially on undeveloped land portions were evaluated and therefore, recommended as the most feasible ones to enhance the performance of road construction projects in Uganda.

Key words: Challenges, Compulsory Land Acquisition, Effects, Construction, Project affected persons, Projects and Relative Importance Index

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Globally, the availability of land as a natural resource is the most important factor in the construction industry. Public infrastructure developments require the right of way to be cleared from any encumbrances for works to commence. Countries such as China, Ghana, Kenya, etc. are undertaking compulsory land acquisition as a way of supplying construction sites for the infrastructural development under the confines of their legal systems (Danso and Manu, 2013). Compulsory acquisition is the power of government to acquire private rights in land without the willing consent of its owner or occupant in order to benefit society (Keith et. al., 2008). In Uganda, compulsory land acquisition which is chiefly guided by the Land Acquisition Act 1965, has been necessitated by the Government's need to provide adequate infrastructures such as roads, railways etc. and safeguard of the country's natural resources such as water bodies, forest reserves and game reserves. Asamoah (2012) highlighted the need for government land acquisition and its effects on the social and economic lives of the poor society who are sometimes deprived of their rights and thus needs critical considerations.

In Uganda, the ownership of land was spelt out in the 1995 Constitution and the Land Act 1998 Cap 227. It provides that, land belongs to the citizens of Uganda under the various tenure systems (Leasehold, Mailo, Freehold and Customary). Similarly, the government and local governments are mandated under article 237 (2) to acquire and

hold land in public trust for public benefit which should conform to the provisions under article 26 of the Constitution (Protection from deprivation from property). The Land Acquisition Act Cap 226 provides guidelines in relation to the compulsory land acquisition by the government and local governments. The power to compulsorily acquire land for public interest is of significance as it is unrealistic for the government to start negotiation for purchase of land with every landowner; this would cause more delays and frustration in government projects.

Despite Uganda's constitutional provision for fair and adequate compensation prior to taking possession of land for implementation of government projects, a big gap still exist in understanding what constitutes fair and adequate compensation. A similar gap exists in developed countries for example a study by Alias and Nasir (2006) highlighted that, adequate compensation which is Malaysia's constitutional requirement remains undefined.

Currently, the Uganda National Roads Authority as an agency of the government is mandated to acquire land for the construction of national roads networks within the country but the process has been taken with mixed feelings and hence causing delays in the overall process of securing right of way and supplying of site to the contractors for execution of civil works. This study was therefore intended to assess the various challenges and effects of delays in compulsory land acquisition on the performance of road construction projects to suggest feasible ways of ensuring faster land acquisition.

1.2 Problem statement

Massive investment in infrastructure development in Uganda has necessitated the need for compulsory land acquisition which as provided for by the Constitution of Uganda amongst other laws emphasises a prompt, fair and adequate compensation to the project affected persons prior to commencement of construction projects.

However, much as there has been attempts in various land acquisition laws and practice in various countries to compensate affected persons for their loss, their dissatisfaction has persisted (Rao et. al., 2018) making it very challenging for the government to fulfil its mandate while requiring land with compulsory land acquisition synonymously looked at as a "legal" grabbing of land (Pedlowski, 2013). Consequently, estimated completion dates in the contracts have been extended which lead to more costs incurred in terms of contractual claims for example the completion of Entebbe Express Way was deferred to May, 2018 from the initially scheduled target of 2017 with about UGX.359 Billion lost due to contract claims and the upgrade of Kanoni-Villa Maria-Sembabule road which commenced on 9th September 2014 with original completion scheduled for 12th September 2017 was later revised to 12th September 2019, with contract time elapsed at 98.3% and land acquisition delays cited as a major cause (Uganda National Roads Authority, 2019). Therefore, the purpose of this study was to assess the various challenges and effects of land acquisition delays and develop feasible strategies that can facilitate a faster land acquisition for road construction projects.

1.3 Objectives of the Study

1.3.1 Main Objective

The main objective of the study was to assess the challenges and effects of delays in compulsory land acquisition on the performance of Uganda's road construction projects.

1.3.2 Specific objectives

i. To evaluate the current processes in land acquisition for road construction projects in Uganda.
ii. To establish the challenges in land acquisition for road construction projects in Uganda.
iii. To evaluate the legal frameworks that affect compulsory land acquisition for road construction projects in Uganda.
iv. To develop feasible strategies that can be adopted to facilitate a faster land acquisition process for road construction projects in Uganda.

1.4 Research questions

i. What are the processes involved in land acquisition for road construction projects in Uganda?
ii. What are the challenges experienced in land acquisition for road construction projects in Uganda?
iii. What are the various legal frameworks that affect the process of compulsory land acquisition for road construction projects in Uganda?
iv. What strategies should be adopted to ensure faster land acquisition for road construction projects in Uganda?

1.5 Research justification

A construction project is successful if it is completed within its estimated time frame, planned cost and to the desired quality. Land acquisition process which has time, cost and human resettlement implications on the construction projects cannot be under looked while planning for infrastructure development projects. The UN Sustainable Development Goals No.9 and No. 11 appeal for facilitation of quality, reliable, sustainable, and resilient infrastructure development in developing countries and for the making of cities and human settlements inclusive, safe, resilient, and sustainable manners, respectively. These goals cannot be achieved without addressing the effects of delayed land acquisition and resettlement. Well-researched objective-oriented solutions are necessary to enable addressing the challenges in land acquisition which has huge cost implications in terms of claims for idle time by the contractors.

Previous studies have identified delays in land (site) delivery as one of the client related delay factors affecting construction projects (Muhwezi et. al., 2014 and Gündüz et. al., 2013). However, these studies did not give an account of the challenges and the feasible solutions to overcome challenges in land acquisition processes for the road construction projects which as guided by the legal frameworks undergoes processes before the land can be delivered to the contractor to start actual construction works. The existing gap of failure to account for the challenges and feasible solutions to overcome the delays in the land acquisition processes if not addressed will lead to persistent extension of scheduled contract times for construction projects with its consequential costs due to claims over idle times by the contractors.

This research therefore was intended to address the knowledge gap that existed by highlighting the processes, challenges and solutions to the challenges in land acquisition for roads construction projects in Uganda so as to objectively advise the various stakeholders in the industry such as the contractors, consultants, client, and funders.

1.6 Significance of the study

The findings of this research are to be used by the organisations and entities involved in land acquisition for infrastructure developments to enhance effectiveness and efficiency in the pre-construction process, as delays in site delivery has both cost, time and human resettlement implications on road infrastructure development projects. These organisations and entities include Uganda National Roads Authority, Ministry of Works, Funders, Contractors, and the general population who are both directly and indirectly affected by the project. Academically, this research is to form a benchmark for future research in relation to land acquisition and its relationship to the construction industry.

1.7 Scope of the study

1.7.1 Content scope

The study was conducted along Mbale-Bubulo-Bumbobi-Lwakhakha (MBBL) a selected national roads network in Uganda. This was because in the selected region, it is the only construction project undergoing fresh land acquisition and because it is the responsibility of the client (UNRA) to deliver land to the contractor through compulsory land acquisition procedures. Other projects such as Mbale-Sironko-

Muyembe-Nakapiripirit were not selected since it was a land acquisition backlog project although the road section is under construction.

The research content has been limited to the current processes in land acquisition, the challenges in land acquisition, an evaluation of the legal frameworks that affects compulsory land acquisition and the feasible strategies that can be adopted to facilitate a faster land acquisition process for road construction projects in Uganda.

1.7.2 Time scope

The study was to be conducted from August 2018 to June 2019 however, time extension was required to finalise the study report.

1.7.3 Geographical scope

The Road project lies within the three eastern districts of Mbale, Manafwa and Namisindwa. It starts at Bumbobi outside Mbale Municipality on the Tororo-Mbale Highway, through Bungokho and Bushiende Sub-Counties in Mbale District (12.1 km). The road provides an alternative route to Kenya and traverses relatively hilly terrain crossing rivers Manafwa and Namuhoma with a few marshlands.

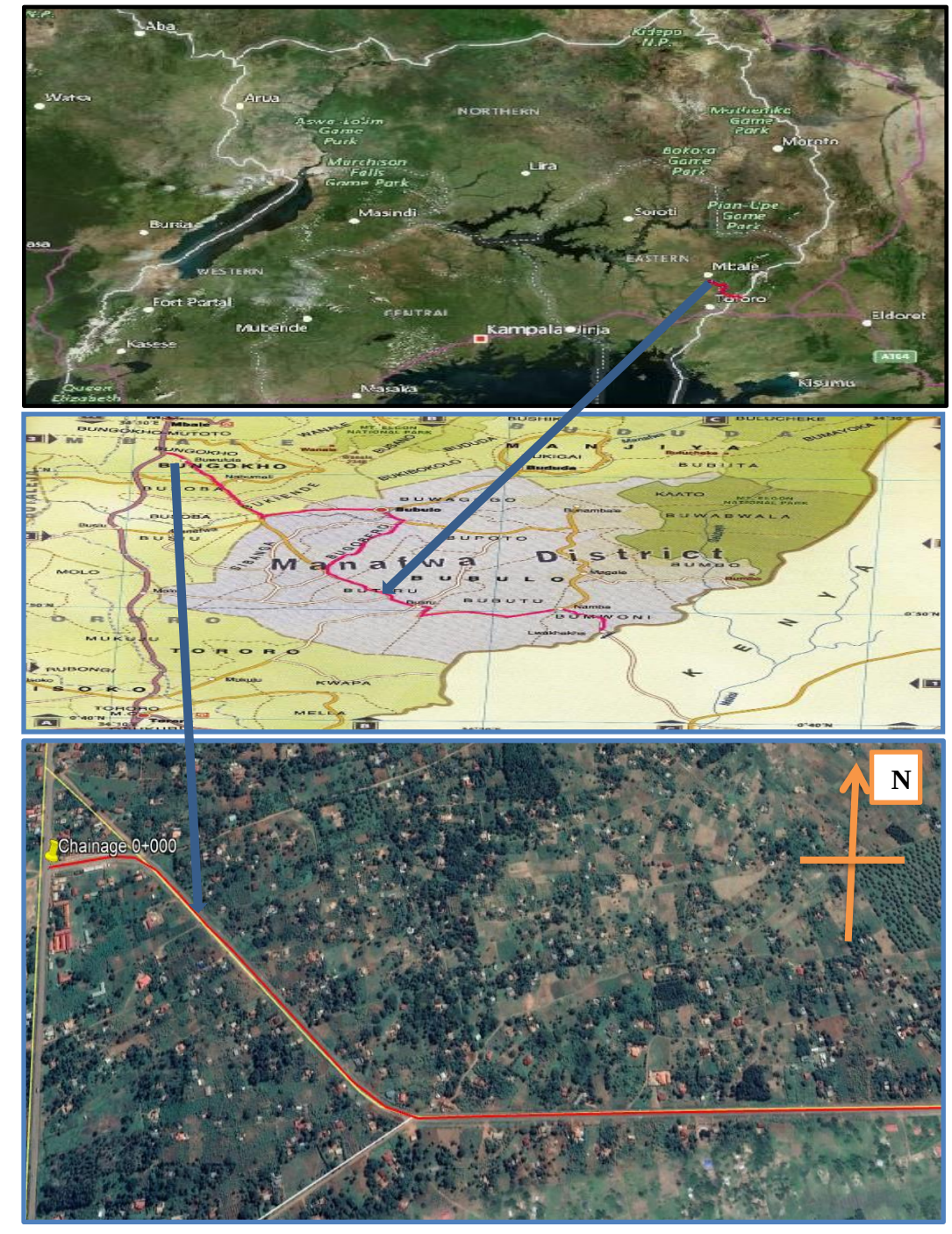

Figure 1.1 Location map of project road

Source: *Modified Google Maps extract*

1.8 Conceptual framework

Conceptual framework provides insightful models for theories and hypothesis (Stichler & Kirk, 2008). The relationship between the independent and parametric dependent variables can easily be presented within the conceptual frameworks. There are several challenges faced in the processes of land acquisition that affects the progress of road construction projects in Uganda and world over. These challenges, which to a great extent exist in Uganda includes reduced tenure security, reduced investments in the economy, weakened land markets, opportunities created for corruption and the abuse of power, delayed projects, inadequate compensation paid to owners and occupants (FAO, 2008), inadequate compensation (Ablo & Asamoah, 2018), minimal compensation (Shankar, 2018), weak legal framework which fails to adopt international standards on the valuation of compensation (Tagliarino et. al., 2018; Tagliarino, 2017). Other challenges experienced include inflation on cost of building materials, unduly delayed compensation payments, delay in undertaking the road construction as some affected persons prevented the demolishing team from pulling down their structures because their compensations were yet to be paid which in turn delayed the scheduled time for the road reconstruction contributing to the late completion of the project (King & Sumbo, 2015).These challenges can be analysed for their level of significance to establish which has the greatest effect contribution to the project performance in the presence of the intervening variable which in this study is held constant at the legal frameworks. The conceptual framework in Figure 1.2 summarises the above analysis.

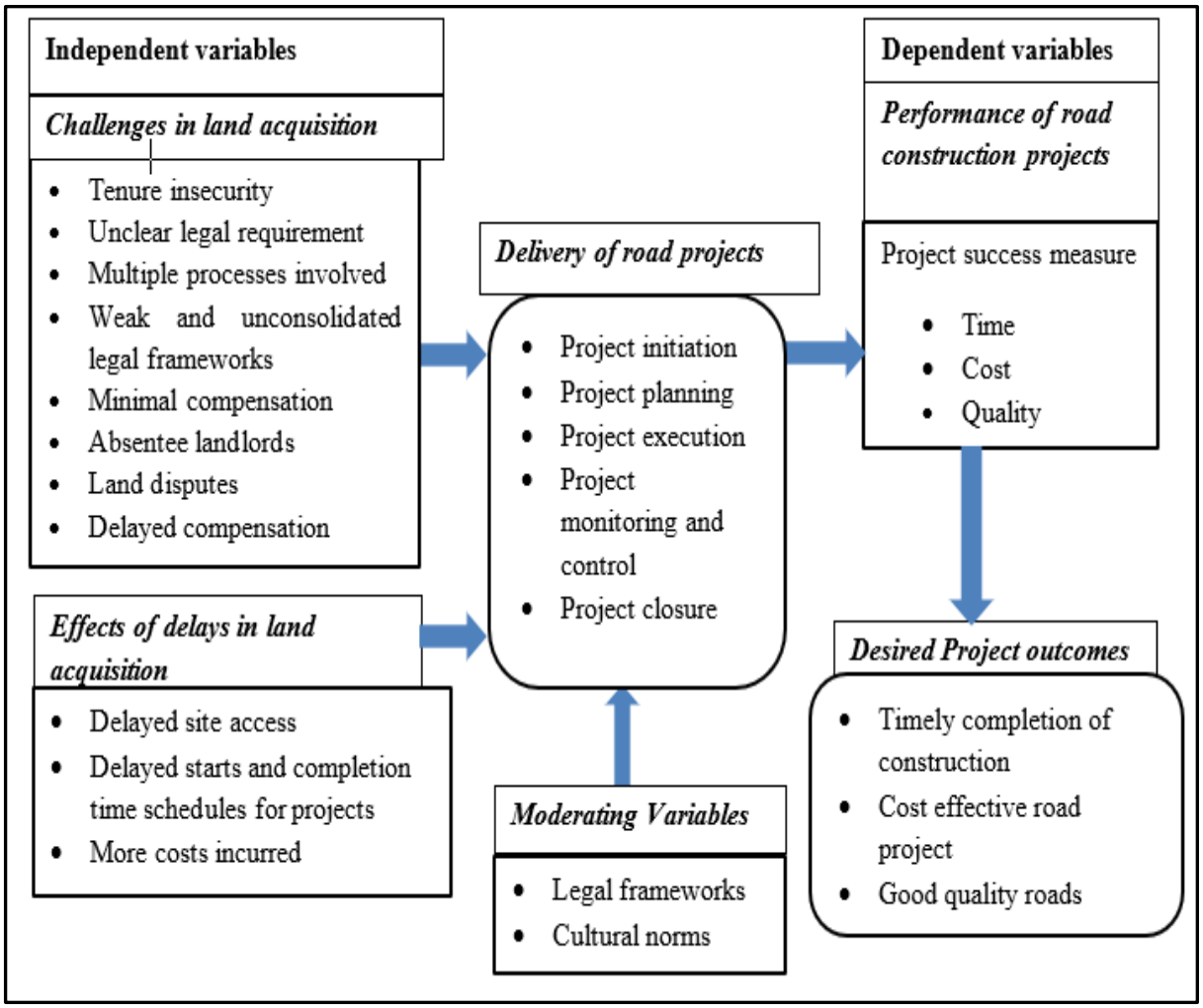

Figure 1.2 Conceptual framework for the study

Source: Researcher (2018)

1.9 Study area

The study was conducted along the first 10km of Mbale-Bubulo-Bumbobi-Lwakhakha (MBBL), an African Development Bank (AfDB) funded National roads network construction project in Uganda. This was because the project is ongoing and due to the reported high rates and volumes of land acquisition challenges being experienced therein.

1.10 Operational definitions

The definitions provided here under are those that the researcher has adopted for the meanings of the terms so described. They may confirm to the general definitions known and may have been modified to suit the circumstances.

1.10.1 Land

In this study, land shall be used to mean an area of the earth's terrestrial surface, encompassing all developments thereon.

1.10.2 Acquisition

This shall be used to refer to the act of gaining possession of the legal rights to the land (use rights, rights to lease, rights to dispose the property etc.)

1.10.3 Construction

A structural definition of construction shall imply (process of constructing buildings, roads, bridges, towers etc.).

1.10.4 Project

A project is a temporary endeavour undertaken to create a unique product or service. It is referred to as temporary endeavour as it has a definite start and end time with an objective of creating something which has never been done before (Project Management Institute, 2008). A project can be anything, a task or complex activity that is a temporary endeavour undertaken to create a unique product, service or result through a mix of the various resources.

1.11 Chapter Summary

This chapter presented the background to the research and further highlighted the research gap through the statement of the problem and identifying the objectives that shall be used as a guide to achieve the outcome of this research. In conclusion, it also presented the need and justification to have this research carried out. The succeeding chapter (Chapter 2) shall present a comprehensive review of the various relevant literatures consulted.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a comprehensive review of the definitions, concepts, theories, and practices that are relevant to this study. The review of the various literature is to provide the researcher with secondary data relevant to the field of study.

2.2 The need for compulsory land acquisition processes and delivery of construction projects

Government's acquisition of land has increasingly come under fire from both the courts and the people whose lands are being acquired wherein the way land is being acquired in India is contrary to the principles that govern a market-based society (Gangopadhyay, 2012). The compulsory acquisition of land has always been a delicate issue and is increasingly so nowadays in the context of rapid growth and changes in land use. Governments are under increasing pressure to deliver public services in the face of an already high and growing demand for land. Many recent policy dialogues on land have highlighted compulsory acquisition as an area filled with tension (Keith et. al., 2008).

Governments of several countries are mandated to provide services to its citizens considering the growing economic and population pressures. Some of these services require land which (FAO, 2002) asserts that its importance for the welfare of individuals is unequivocal. The history of the development of compulsory powers by public authorities has been the one of striving to achieve a fair balance between

retaining safeguards for the individual whose land is required and on the other, the importance of not delaying schemes which are to serve a much needed public purpose while offering value for money to the tax payer (Rao et. al., 2017).

Compulsory land acquisition has found relevance in the following public interests development aspects (FAO, 2008): Transportation uses including roads, canals, highways, railways, bridges, wharves and airports; Public buildings including schools, libraries, hospitals, factories, religious institutions and public housing; Public utilities for water, sewage, electricity, gas, communication, irrigation and drainage, dams and reservoirs; Public parks, playgrounds, gardens, sports facilities and cemeteries and for defence purposes. Therefore, it is of utmost importance to uphold and implement compulsory acquisition especially where public interests are at stake.

2.3 Processes of compulsory land acquisition in developed and developing countries

Most countries articulate a need for some minimum process that guarantees certain procedural rights to the landowner. Several countries set out a broad right of due process in their constitutions (US, Malaysia, Taiwan, Korea and Singapore) although in at least one country (Singapore) the courts have rendered such process unnecessary by rewriting their statutes to not require compliance with the due process clause. Some countries require negotiation between landowner and government to precede some or all exercises of eminent domain (US, Thailand and Singapore), and most countries provide for negotiation at some stage of the process. Virtually every country requires notice to be given to the occupier and or owner of the land (or interests therein) to be acquired. Most countries also provide a process for appealing against, if not the

declaration of public purpose, then at least the process or the compensation award. Most also require at least one public hearing. Some countries provide a specific tribunal for appeal purposes (Hong Kong, New Zealand, and Singapore) (Kotaka et. al., 2016).

In china land remains publicly owned and governed by “dual-track” institutions for rural and urban land. In rural China, land is owned collectively, that is, by groups of peasants established during the Maoist period. Members of rural collectives, entitled as collective landowners by their rural household registration (*hukou*) status, may legally sell neither their share of collective farmland nor their own homestead land. Urban land is owned by the “state,” as represented by the local government. Only urban land may be leased for construction, and only the state or local government may convert land from rural to urban status. Urban land use rights are leased through a few mechanisms, some of which are open, such as auctions, and some of which take place through private negotiations. The lengths of the leases are based on the type of land use (Rithmire, 2017). Compulsory land acquisition in China involves eight key steps: acquiring authority makes an application for using rural land to local government; permission grant from the State Council or provincial level government; planning to acquire land in details; promulgates the decision and plan on land acquisition to the affected residents; registers the compensation in specified authority (affected residents); protocols the compensation planning (local governments); confirms the compensation planning (superior governments); final implementation of the compensation planning and distribute payment (Ty et. al., 2013). Figure 2.1 summarises the land acquisition processes in China.

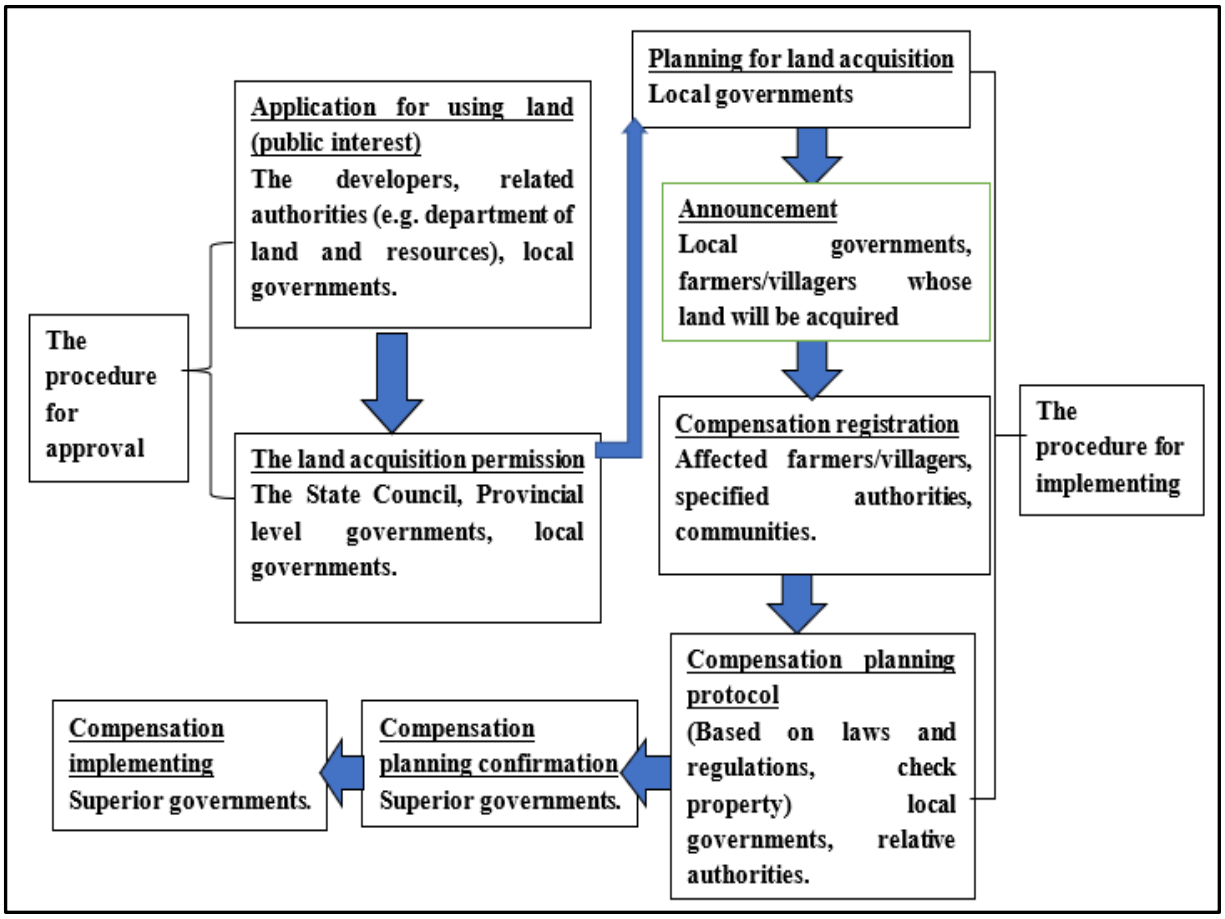

Figure 2.1 Compulsory land acquisition processes in China

Source: Ty et. al. (2013)

In Ghana, before an Executive Instrument (EI) is published, a Site Advisory Committee (SAC) must be set up to advise the acquiring authority about the feasibility, suitability or otherwise of the intended acquisition and whether or not there is alternative land for such project before final compensation can be assessed and awarded to the affected persons (King and Sumbo, 2015; Larbi, 2008). Figure 2.2 summarises the land acquisition processes in Ghana.

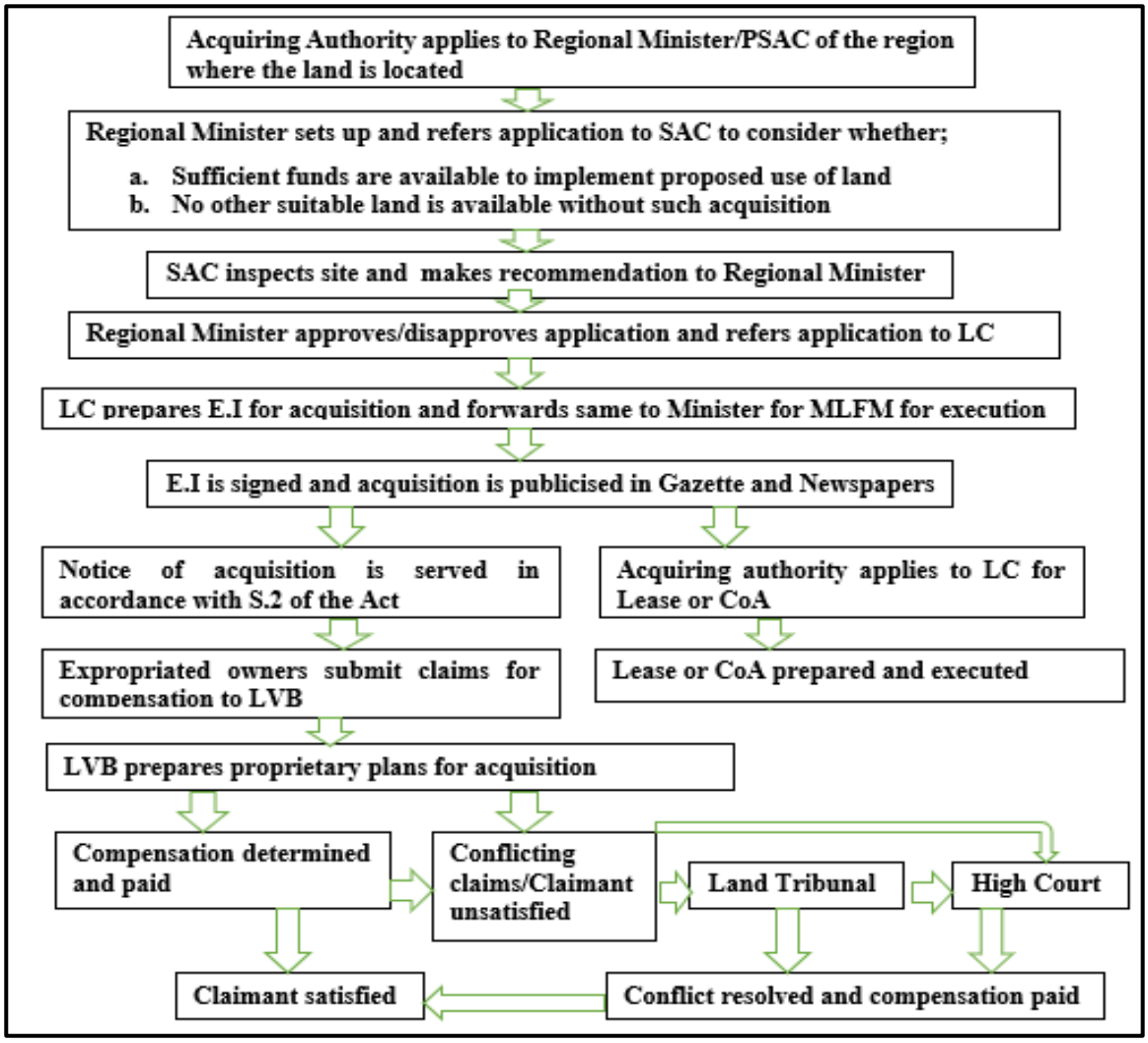

Figure 2.2 Compulsory land acquisition processes in Ghana

Source: Larbi (2008)

In Nigeria, land acquisition and compensation processes have been summarized under seven sequential stages; planning, publicity, valuation and submission of claim, payment of compensation, possession, appeals and restitution (Aluko 2012; cited from Akinsola and Olaopin, 2016). Notices of acquisition do not necessarily have to be served prior to expropriating land (Tagliarino et. al., 2018).

In Tanzania, all land is vested in the office of the president on behalf of the citizens with three major categories; general land, village land and reserved land. The acquisition process is guided by the Land Acquisition Act of 1967. There are several processes that are undertaken before possession can be taken by the acquiring government body. Compulsory land acquisition involves four key steps; planning and decision to acquire land, legal preliminaries including getting statutory authority and serving notices, field investigations including valuation and finally payment of compensation to the would be dispossessed. Additionally, access to land for public use in Tanzania can be achieved through negotiations and persuasions; legalized force and through compulsory acquisition, with the latter normally effected through the power of eminent domain which gives the state powers to expropriate private property for public use without necessarily seeking the owner's consent subject to payment of fair and prompt compensation (Kombe, 2010). Figure 2.3 summarises the land acquisition processes in Tanzania.

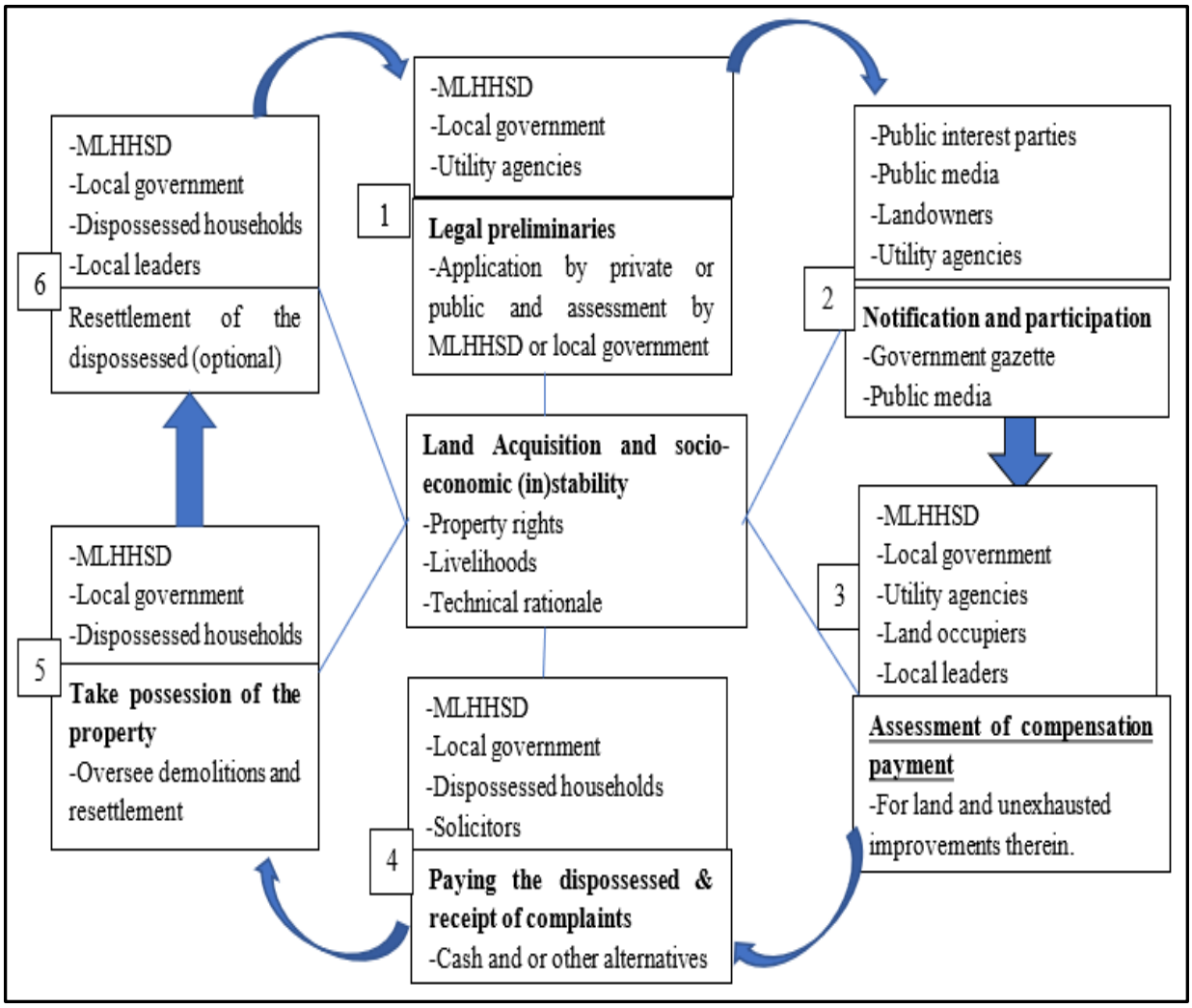

Figure 2.3 Compulsory land acquisition in Tanzania

Source: Kombe (2010).

The requirement for fair and prompt payment before taking possession in Tanzania is an equal requirement in the land acquisition for public use in Uganda as provided in article 26 of the 1995 Constitution.

In Uganda, the procedure for compulsory acquisition of land is laid down under the Land acquisition Act of 1965. However, ministerial guidelines on compulsory land acquisition for government projects issued in July 2017 provides a step by step

procedure to be followed in compulsory acquisition of land for public interest in Uganda. These include: Identification of the need for land, declaration of the area as a planning zone by a Gazette Notice; consultation and sensitization of affected community; inspection of the land, developments, crops/trees and a census of all the affected persons by the assessors; signing of assessment forms by the assessed persons; declaration of completion of inspection as the overall project cut-off date; preparation of a draft valuation report for submission to the Chief Government Valuer; review of the report by the Chief Government Valuer and making comments; amending the valuation report by the assessors based on above comments; approval of the valuation report and handing over to the acquiring entity for disclosure; arbitration, compensation and resettlement and titling by the Uganda Land Commission.

Generally, processes are laid down procedures of operation to achieve the end goal. In land acquisition, any delay in either of the processes is likely to have an impact on the schedule for acquiring an unencumbered right of way which extends into the scheduled start time for the execution of civil works. This consequential delay in the start time for execution of civil works thus causes delay in the overall construction process. In Uganda, the law requires prompt payment of fair and adequate compensation to the affected landowner before any public related construction or development can be commenced on such land. This implies a delay in undertaking and fulfilling the requirements of a laid down process causes delays in the execution of the project thereon.

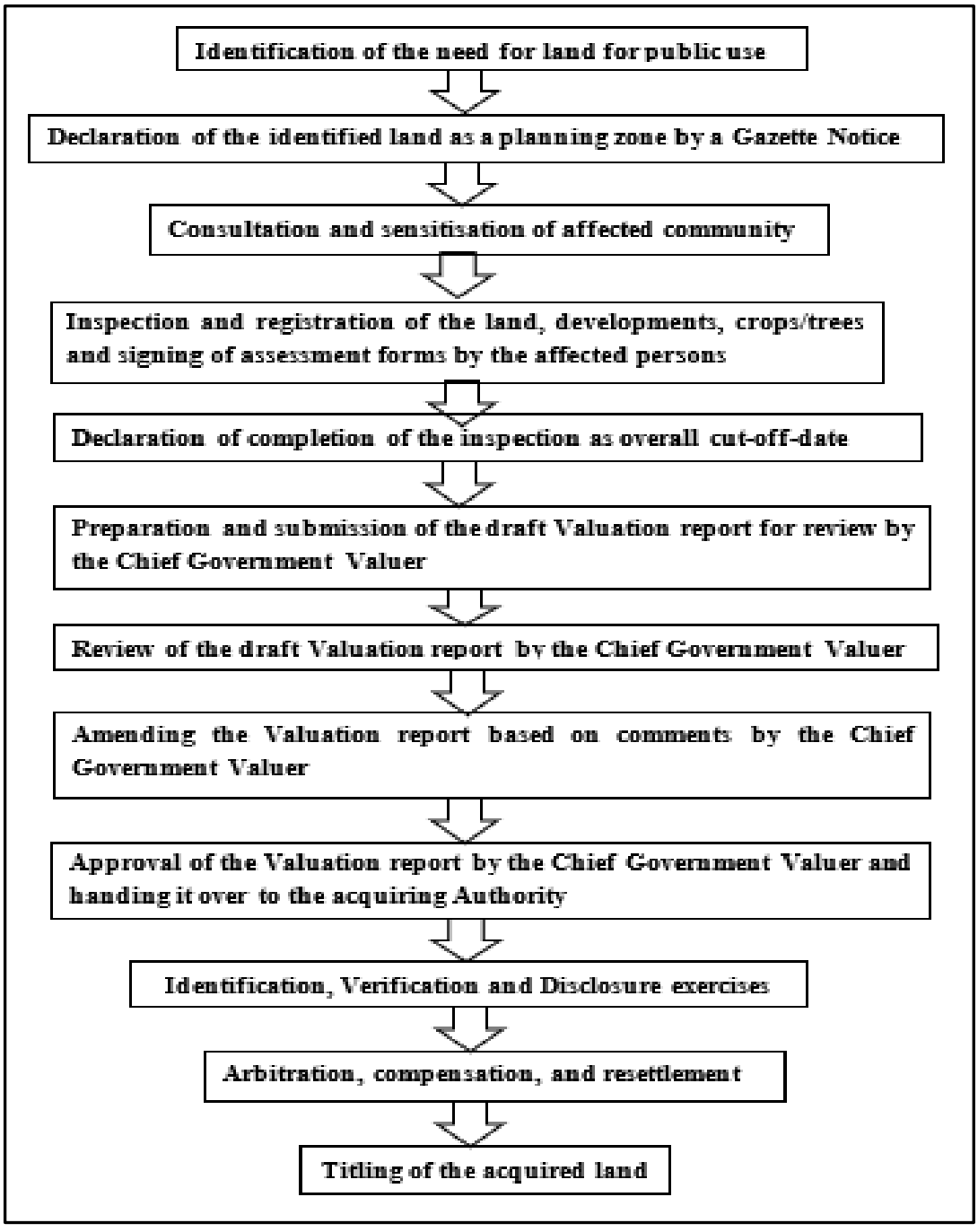

Figure 2.4 Compulsory land acquisition process in Uganda

Source: Primary data (2018)

In all the above reviewed processes, there are areas of common interest that applies to all countries for example the need to declare that land is required for acquisition to implement government projects, compensation claims registration, payments, and

arbitration processes. These ultimately are essential elements in any compulsory land acquisition process for implementation of government projects.

2.4 Challenges in compulsory land acquisition processes

In Vietnam, a recent study indicated that much as there was loss of land, majority of the Hue people were able to reconstruct their livelihoods with better living conditions after acquisition (Nguyen et. al., 2017). Compulsory land acquisition has been faced with a mixed reaction with focus being drawn towards it amidst the need for infrastructure development as (Pedlowski, 2013) highlights how challenging it is for the government to fulfil its mandate while requiring land for its various projects in which it synonymously looked at compulsory land acquisition as a "legal" grabbing of land. Furthermore, "Land grabbing" has become a catch phrase used to define a myriad of processes involving the massive acquisition of land, mainly in the developing world (Borras Jr and Franco, 2012). Ultimately, distinct authors have associated land grabbing with globalization and, more specifically, with issues related to food and biofuels production and rent extraction (Cotula, 2012; Robertson & Andersen, 2010 & Zommers, 2010).

Massive infrastructural projects such as road constructions require land. In the case of Uganda, the need for land to implement government projects is on the rise due the national focus on improving both interior and cross border movement with the aim of facilitating effective, efficient and an accessible market economy. Compulsory acquisition of land requires striking a balance between the public need for land and on the opposite end providing security of tenure to ensure the protection of the rights of the private property owners. It has been established that, failure to effectively and

efficiently handle compulsory acquisitions results into; reduced tenure security, reduced investments in the economy, weakened land markets, opportunities created for corruption and the abuse of power, delayed projects, inadequate compensation paid to owners and occupants (FAO, 2008).

A recent study in Ghana found that the farmers' involvement in the compensation process did not go beyond identification and measurement of their farms. With limited participation in the acquisition and compensation process, the farmers felt deprived of their entitlements and viewed the compensation as inadequate for their lost livelihoods and generational inheritance (Ablo & Asamoah, 2018). There were also claims by the affected community that their living conditions became worse-off after the acquisition with consequential challenges such as family disunity over the sharing of compensations awards, congestion, dust due to partial demolition of the habitable house, loss of business customers and profits, difficulty in renting new accommodation, 'other damages' specifically 'injurious affection' that must be compensated, several complaints to the authorities responsible for paying compensation, access difficulties, insecurity for example demolition of the frontages and security walls of some houses rendered them open, inflation on cost of building materials, unduly delayed compensation payments and delay in undertaking the road construction as some affected persons prevented the demolishing team from pulling down their structures because their compensations were yet to be paid. This in turn delayed the scheduled time for the road reconstruction, which also contributed to the late completion of the project, suggesting that, a good dialogue between the authorities and the affected individuals would have helped the affected persons to appreciate the

process better. Notably, severe challenge of compensations paid in piece meal with the worst off being those expropriated when they had not been paid compensation at all were realized which negatively affected economic and social activities that were supported by the demolished properties and hence the livelihoods of the people (King & Sumbo, 2015).

The World Bank's Land Governance Assessment Framework found that, in Nigeria, "a large number of acquisitions occurs without prompt and adequate compensation, thus leaving those losing land worse off, with no mechanism for independent appeal even though the land is often not utilized for a public purpose" with such negative associated with corruption, limited capacity, and insufficient financing as well as Nigeria's weak legal framework. According to a recent study of compensation procedures established in national laws of 50 countries, Nigeria's compensation procedure lags many of the countries assessed because the Land Use Act mostly fails to adopt international standards on the valuation of compensation (Tagliarino et. al., 2018; Tagliarino, 2017). In Delhi, much as the law provided people with the right to contest the valuation of their lands, it was extremely hard for ordinary landowners to challenge the state's estimates, ultimately allowing the administration to dispossess large sections of the population after paying a minimal compensation (Shankar, 2018). These challenges need to be objectively addressed so that land acquisition can be effectively and efficiently concluded to avail unencumbered land access for road construction.

2.5 Land acquisition legal frameworks in Uganda

It is the policy of the Ugandan Government that persons affected by development projects in general and road right of way are adequately compensated for their structures, crops, and loss of livelihood. There is in place an elaborate legal framework to ensure compliance with these policy requirements.

2.5.1 Constitution of Uganda, 1995

Article 237(1) of the Constitution vests all land of Uganda in the citizens of Uganda and can be held under four tenures; Customary, Leasehold, Mailo, and Freehold. In Uganda, government or local government can acquire land in public interest but such acquisition should be carried out in a manner that provides a prompt, fair and adequate compensation to the affected person prior to taking possession as provided under Article 237(1) (a) and Article 26 of the 1995 Constitution. Whereas Uganda seems to be grappling with the challenges of compulsory land acquisition, a recent study in over 50 countries recommended adoption of Uganda's legal framework amongst other countries which formally recognize community land rights regardless of whether those rights are registered during the compulsory acquisition process (Tagliarino, 2017). In Uganda, the law requires prompt, fair and adequate compensation prior to taking possession however, there is no clear definition of what is fair and adequate in the Constitution. Failure to objectively address this gap will always leave the affected persons claiming for low compensation, rejection of compensation awards, denial of access to land for construction and thus causing delays in the overall construction progress.

2.5.2 The Land Act (1998)

This address land holdings, management control and dispute resolution as the principal legislation on land tenure in Uganda. The Act states that all land in Uganda, whether alienated or not, is subject to all existing public rights of way which are reserved and vested in the Government on behalf of the public, and that all such rights of way are maintained by the public uninterrupted unless they are terminated or altered by the decision of the Minister in writing. Section 43 of The Land Act (1998) gives powers to the Government or Local Governments to acquire land for public interest which should conform to the provisions of Article 26 and Clause (2) of Article 237 of The Constitution. Land acquisition in the public interest is also subject to Section 42 Sub-Section 7 Paragraph (b) of the Land Act 1998, where it is emphasized that "no person from whom land is to be acquired shall be required to vacate that land until he or she has received the compensation awarded to, or agreed to, by them". Since no clear definition is provided for what is fair and adequate and, in a situation, where the affected person has not agreed to the compensation awards, the construction works cannot commence until such an affected person is paid compensation. This causes general delays in the construction project. In India, compensation award is categorised as Consent Award and General Award, with the later given to a person discontented with the compensation value. The discontented person can thus opt for litigation but first after receiving the disputed amount or the General Award which would give opportunity to the government to access the land (Patil and Ghosh, 2017). This is a gap in the Ugandan legal framework as no amount is awarded to a discontented affected person apart from the compensation award and therefore access to land for

construction works cannot be obtained as the law requires payment of award prior to accessing the land.

Whereas Section 78 of the Act gives valuation principles for compensation i.e. compensation at depreciated replacement costs for rural properties and market values for urban properties, with an additional disturbance allowance calculated at 15% or 30% of the sum awarded to that person depending on the time required for vacation, concerns over the fairness and adequacy of the compensation awards still suffices. An appropriate method for compensation assessment and award should be adopted for example, consideration of future incomes from the subject property should not be ignored. The current basis of compensating for rural properties based on the market values undermines fairness through ascertaining "equitable value" which considers the advantages and disadvantages both parties will gain from the transaction (IVSC, 2017). Section 41(6)(b) of the Land Act provides that no person from whom land is to be acquired shall be required to vacate until they receive full compensation and other kinds of assistance however, the meaning of "other kinds of assistance" are not explicit in Uganda's law. This leaves the affected persons in dilemma and claim for more compensation. These claims may lead to the affected person denying access to land for construction works.

The Land Act, 1998 had provided for land tribunals to resolve all land related issues. However, since their suspension in 2007, the High Court handles all land-related cases as provided for in the Land Acquisition Act. The Land Act also states that traditional authority mediators must retain their jurisdiction to deal with and settle land disputes. Potential gap exists in terms of accessibility and affordability by the project affected

persons (PAPs) and potential of case delays if the High Court must handle land-related grievances.

2.5.3 The Land Acquisition Act (1965)

The Land Acquisition Act (1965) makes provision for the compulsory acquisition of land for public purpose and for matters incidental thereto. It provides subject to Section 3 that the minister may declare by statutory instrument that land is needed for public purpose and specifies the requirements as stipulated in Section 3(2).

Prior to issuance of notice to persons having interest in the land under section 5 by the assessment officer, an inquiry and award for compensation shall be in line with section 6 of the Act. Although project affected persons are required to be identified and served notices as a process, there is no explicit provision for baseline information gathering and socio-economic surveys as part of a Resettlement Action Plan process. This most likely leads to failure to establish the most feasible resettlement strategies which leads to delays in resettlement plan implementations and eventual impact on the progress of construction projects.

Another potential gap is that there is no distinction made in the law based on gender, age, or ethnic origin during compensations. This could trigger family disputes and thus identifying the rightful beneficiary becomes a challenge. If the actual beneficiary cannot be identified, time is lost in waiting for the families to resolve their differences before compensation can be awarded and access granted to land.

Furthermore, there is a gap in that the law is not open about land-based resettlement strategies and focuses more on cash-based compensations. As compensation money

may not be available, peripheral lands form the acquired ones become more expensive suddenly. This makes the assessed and awarded claim insufficient and thus triggering claims for under valuation or low compensation awards and thus the affected persons may deny access to the land.

2.5.4 The Roads Act (1964)

The Roads Act of 1964 is a critical piece of legislation with respect to the Road Development Projects. It defines a road reserve as that area bounded by imaginary lines parallel to and not more than fifty feet (50ft) distant from the centre line of any road and declared to be a road reserve. The Act is, however, silent on whether such land is "taken" for the state, but states that no person shall erect any building or plant, trees, or permanent crops within a road reserve. It also allows the roads authorities to dig and take materials from the road reserve for the construction and maintenance of roads approved by the District Commissioner (DC) or Chief Administrative Officer (CAO) without payment to any person. The Minister or, with the consent of the Minister, a District Commissioner (Chief Administrative Officer in the Current Government) in relation to any road within or passing through any Government town or an Administrator in respect of any area not being in a government town may, by order prescribe the line in which buildings shall be erected in such town or area, or prescribe the distance from the centre of the road, within which no building shall be erected in such town or area.

The existing gap is that the reserve is only limited to fifty feet (30meters) and therefore further expansions of the road will likely require a fresh need for land acquisition amidst the acquisition challenges which eventually cause delays in the construction

process. Furthermore, the Act does not justify why other reserves are up to 50meters such as the designed Atiak-Laropi and Acholibur-Musingo Roads amongst others.

2.5.5 National Environment Management Act Cap 153 and National Environment (Wetlands; Riverbanks and Lakeshores Management) Regulations (3/2000)

The provisions of the National Environment Management Act and the National Environment (Wetlands; Riverbanks and Lakeshores Management) Regulations, 2000 is very eminent in the process of land acquisition especially for the construction of Roads sections and Bridges that fall within the reserve banks. The Act provides for procedures that must be followed to obtain land and environmental clearance prior to construction works. These procedures are time consuming and thus impact negatively on the project timeline and cost. As provided in Sec. 3, this regulation applies to the management of all wetlands in Uganda with the objectives specified under Sec.4. The implication of Sec. 3 towards the management of wetlands empowers the Government to hold wetlands in trust for the people, therefore making all wetlands and the recommended zones and riverbanks public land. This in an ideal manner would ensure that projects within reserves such as construction ferry landings and bridges should not suffer from the challenges of land acquisition, however, in the real sense predominant owners (doctrine of discovery) have always claimed ownership of such lands. This makes it hard for construction works to progress until acquisitions are completed.

2.6 Construction project performance measurement

Traditional project management emphasises that for a project to be successful, it must be completed within schedule time, budgeted cost and with good quality output. Chan & Chan (2004) argues that, while some writers consider time, cost and quality as predominant criteria, others suggest that success is something more complex. The UK working groups on Key Performance Indicators (KPIs) have identified ten parameters for benchmarking projects, in order to achieve a good performance and these consist of seven project performance indicators; construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product and client satisfaction with the service; and three company performance indicators, namely: safety, profitability and productivity (as cited from Takim & Akintoye, 2002). This study focussed on construction cost and time as major performance measure in assessment of the challenges and effects of delays in land acquisition on the performance road projects.

2.7 Summary of literature

This chapter presented a review of the various relevant literatures relating to the processes, challenges and the various legal frameworks affecting compulsory land acquisition and their effect on the construction project progress. Whereas numerous studies identified the challenges in compulsory land acquisition, no ranked output regarding the challenges and feasible solutions to be adopted has been carried out, and therefore this study was aimed at identifying and by ranking the challenges and feasible solutions to determine their levels of significance and effect on the

performance of road construction projects. The succeeding Chapter (Chapter 3) presents the methodologies through which the research objectives were achieved.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the various ways through which the specific objectives were achieved through the research design, approaches, data collection, analysis and presentation methods.

3.2 Research design

Both quantitative and qualitative methodologies were used to conduct the study. Quantitatively, the collected numerical data from the field was analysed using SPSS 25.0 because aspects of the intended research questionnaires assessed areas that requires numerical figures such as age, number of years etc. Quantitative research implies explaining phenomena by collecting numerical data that are analysed using mathematically based methods particularly in statistics (Aliaga & Gunderson, 1999). Quantitative design was adopted as the challenges and feasible solutions established were ranked to determine which has a higher relative effect on the progress of road construction in Uganda.

Qualitative design was adopted and applied where the aspects could not be measured quantitatively for example; peoples' perceptions and beliefs, values and attitudes and these were quantified through rankings where numerical values were attached to the qualitative variables.

3.3 Research Approaches used

A case study approach was adopted in this research and the findings can be applied to all the National roads construction projects within the country. The case study approach according to (Denscombe, 2014), enables the researcher to use multiple sources of data and a variety of research methods to explore the research questions which in turn foster the validation of data, which (Yin, 2003) asserts that any findings or conclusions are likely to be more compelling and accurate. The case study strategy is best for gaining a deeper understanding of the research being investigated as in (Morris and Wood, 1991). The case study approach was adopted for this study to give a deeper understanding through multiple types of data sources that was obtained through concentration in the study area.

Descriptive or phenomenological research approach was incorporated to identify and explain a clear picture of what was occurring on the ground. This was adopted as the research involved conducting interviews, reading documents, and visiting the project area.

3.4. Study population

The study population was restricted to respondents directly attached and affected by the selected projects within the geographical location of Uganda. The affected persons were only limited to those within the first 10Km section of the overall 44Km road stretch since similar challenges were highly likely to be encountered in the other sections. A total population of 464 project affected households was established for the identified target respondents.

3.5 Sample size and Selection

The sample size representative of the target respondents in this study was 210 project stakeholders, determined based on the Krejcie and Morgan's sample size determination table (Appendix 1), (Krejcie and Morgan, 1970). Out of the targeted sample size representative of 210 stakeholders, the study obtained responses from 191 stakeholders and this represents a 91% of response rate. Table 3.1 summarizes the details of the study population, sample size and response rate of the study.

Table 3.1 Study population and sample size determination

Target respondents	**Study population, N**	**Sample size, (s)**	**Sample size achieved**
Project Managers	5	5	3
Contractors (Engineers)	5	5	3
Project Consultants	5	5	4
Local leaders	20	19	14
Project Land Acquisition Officers	50	44	35
Project Affected Persons (PAPs) within the first 10Km section	379	132	132
Total	**464**	**210**	**191**

*Source: Primary data with **s** determined using Krejcie and Morgan sample size calculator.*

3.6 Sampling design and strategies

The research used various sampling methods in order to establish the sample size. A purposive sampling method was used to select key informants while systematic random sampling was used in the selection of respondents for general interviews. The

key informants/respondents included Project Managers, Contractors, Project Consultants, Local leaders, Land Acquisition Officers and the PAPs.

The purposive sampling technique which is a non-probability sampling was used to study certain domains with knowledgeable experts within. This was because the inherent bias of this technique contributes to its efficiency, and thus stays robust even when tested against random probability sampling. Purposive sampling was fundamentally used to ensure the quality of data gathered and as such, reliability, and competence of the informants was ensured.

A systematic random sampling technique was used to select respondents especially the PAPs at household level along the first 10km of the research project area.

3.7 Data collection methods

3.7.1 Questionnaire survey

The relevant research data was collected using a closed ended questionnaire which allowed the researcher to reach a large sample within a limited time while ensuring objectivity and confidentiality of the respondents.

3.7.2 Interviews

A face-to-face objective oriented conversation between the researcher and the respondents with the help of interview guide was conducted. An interview guide was designed and reflected the relevant research objectives related questions which were asked to the respondents to give their responses as required by the questions. The interview guide was used for respondents with no technical experience in the land acquisition process such as the Project Managers, Project Engineers, Consultants and

the local leaders as it enabled them to speak out their minds and feelings about the situation on the ground and help the researcher to get direct information.

3.7.3 Focus Group Discussions (FGDs)

This involved convening together a target group of respondents to objectively discuss the processes in compulsory land acquisition, the challenges involved, the loopholes in the legal frameworks and how the challenges and the loopholes in the legal frameworks can be addressed. Two discussion schedules were organised and an elaborate discussion in line with the research objectives undertaken.

3.7.4 Documentary review

This involved search and reviews of related published documents to the study area to establish the processes in compulsory land acquisition in selected countries, the general challenges involved and the loopholes in the legal frameworks to determine the feasible solutions to enhance faster acquisition of land.

The relevant documents were obtained with a focus on the latest publications made in line with the study area and as such, secondary data was obtained.

3.7.5 Observations

Observations were applied where physical effect of compulsory land acquisition and road constructions are existent. For example, cases of injurious affections to properties and access challenges. This was to validate the challenges associated with compulsory land acquisition and roads construction.

3.8 Data collection instruments

Generally, the core method of collecting data was using questionnaires (**Appendix iv**), Interview guides (**Appendix v**), Focussed Group Discussions (FGDs) guides and Documentary checklist of published literature relevant to the subject area of study.

Table 3.2 Data collection instruments

Objectives	Instruments for data collection
1	Questionnaires, interview guides, Documentary check list, FGDs.
2	Questionnaires, interview guides, Documentary check list, FGDs.
3	Interview guides, Documentary check list, FGDs
4	Questionnaires, interview guides, Documentary check list, FGDs

Source: Primary data

3.9 Data sources

3.9.1 Primary data sources

The primary data was collected using questionnaires which were distributed to respondents in the research area who answered the questions therein. The questions comprised of aspects relating to the procedures and processes of land acquisition, the challenges in land acquisition, a review of the guiding land acquisition legal frameworks and the feasible solutions to the challenges faced in the land acquisition processes so as to enable availing of land to the contractors for uninterrupted execution of civil works. These targeted all groups identified such as Project Managers, Contractors, Project Consultants, Local leaders, Land Acquisition Officers and the PAPs within the first 10Km section of the road project.

Interviews were conducted with the Project Managers, Project Engineers, Consultants, and the local leaders to evaluate the processes and effects of delays in a land acquisition and feasible measures that can be adopted to facilitate faster acquisition of land for road construction projects.

Direct observation was used by the researcher to establish on ground the challenges of delayed compensation in availing land to the contractor. This was done by undertaking purposeful transect drive along the identified national roads network.

FDGs was used as a consultative method whereby the researcher convened with various groups of people such as the Land Acquisition Officers to discuss matters relating to land acquisition processes and procedures, guiding legal frameworks, land acquisition challenges experienced and possible solutions.

3.9.2 Secondary data sources

Secondary data was chiefly collected through the review of the various literature, both published and unpublished. These data were obtained through internet search, journal articles, textbooks, land laws, other related laws, and guidelines. Through the above sources, relevant information was abstracted and used to enhance the research.

3.10 Data analysis

After collection of the data both primary and secondary, it was organized, analysed, and presented as coded data inform of charts and table due to the ease it presents in terms of use, interpretation, and analysis.

The analysis of the data was done using SPSS 25.0, statistical data analysis software and Microsoft word excel. The contribution of each of the challenges to overall delays

on land acquisition for road construction project and the feasible strategies were examined and the ranking of the attributes in terms of their criticality as perceived by the respondents done by use of Relative Importance Index (RII) and the results of the analysis presented in a tabular form.

Researches notably (Muhwezi et al., 2014; and Gündüz et al., 2013) amongst others highlighted the relevance and use of RII in analysis of data. RII applicably helped in determining the level of significance of the assessed factors to establish which one had the least or the highest significance through rankings. Accordingly, RII was calculated using equation (3.1)

$$RII = \frac{\sum_{i=1}^{5} W_i}{A*N} \quad \text{.....Equation (3.1)}$$

Where W_i = total sum of each factor from very low to very high); A = highest weight in this study (5 = Strongly agree); and N = total number of respondents for each variable (167 in this case); and RII values fall within 0 to 1 ($0 \leq RII \leq 1$), with 0 representing the least significant and 1 indicating the most significant factor.

A comparative evaluation of the various legal frameworks through literature review was done and findings recorded in MS word document. Other factors remaining constant, the analysed data using SPSS 25.0, Microsoft word excel and RII has been adopted as the basis of making conclusions and necessary recommendations for this study.

3.11 Data collection procedure

Before going to the field for data collection and for purpose of introduction to the respondents and any local authority, the researcher obtained letter of introduction

from Graduate School, Kyambogo University to enable effective research to be carried out. This letter was issued to UNRA, local leaders within the target project area, project managers, consultants, and Engineers.

3.12 Objective oriented procedures

3.12.1 Land acquisition processes evaluation

The various land acquisition processes were identified through literature reviews and evaluated to establish their implementation and level of significance. The level of significance was evaluated on a 5-point Likert scale, their RII computed and the results presented in form of a table. The average RII was computed using equation (3.2) and resultantly, land acquisition processes with RII much lower than the mean RII were recommended for either removal or merging with other processes.

$$Mean\ RII = \frac{\sum_{i=1}^{n} RII}{n} \quad \text{……..…Equation (3.2)}$$

Where *n* = total number of processes evaluated.

3.12.2 Land acquisition challenges evaluation

The various land acquisition challenges were identified through literature reviews and evaluated to establish their level of significance and effect on the performance of road construction projects. The level of significance was evaluated on a 5-point Likert scale, their RII computed and the results presented in form of a table. The challenges with highest RII values were deemed to have the greatest significance and effect on the performance of road construction projects.

3.12.3 Land acquisition legal frameworks evaluation

The various land acquisition guiding legal frameworks were reviewed to establish gaps that lead to challenges in land acquisition. The identified gaps were evaluated on a 5-point Likert scale and RII computed and the results presented in form of a table.

3.12.4 Feasible solutions to the challenges in land acquisition

The various feasible solutions to land acquisition challenges were identified through literature reviews and evaluated to establish their level of significance and effect on the performance of road construction projects. The level of significance was evaluated on a 5-point Likert scale, their RII computed and the results presented in form of a table. The feasible solutions with the highest RII were considered the most significant to addressing the challenges of land acquisition to enhance the performance of road construction projects in Uganda.

3.13 Data quality control

3.13.1 Data reliability

Reliability of research instruments refers to the degree to which a research instrument yields consistent results or data after repeated trials. This research study used Test-retest method. The test-retest method involved administering the same scale or measure to the same group of respondents at two separate times but after a certain time interval has elapsed. A closed ended questionnaire was administered to selected respondents to enable consistent areas of assessment designed in line with the study objectives. Reliability was achieved as the tested instruments yielded consistent results within an acceptable kappa value (k) of 0.80 using equation (3.3) (Cohen, 1960; Bujang & Baharum, 2017).

$k=(p(a)-p(e))/(1-p(e))$ ……..……..Equation (3.3)

Where; *k* is the kappa value, *p(a)* is the probability of relative observed agreement and p(e) is the probability of an agreement based on chance; and *k* values fall within -1 to 1 ($-1 \leq k \leq 1$). Where k is less than 0.00, there is perfect disagreement; where *k* lies above 0.00 and below 0.6, there is weak agreement; where k lies from 0.60 to 0.79, there is moderate agreement; where *k* lies from 0.80 to 0.90, there is a strong agreement and where *k* lies above 0.90, there is an almost perfect agreement.

3.13.2 Data validity

The validity of the data obtained from the field was be ascertained by testing the designed questionnaire and interview guide among 5 respondents and their responses were used to make necessary adjustments to the research questionnaire and the interview guide. The validity of the research questionnaire contents was determined by consulting the validity of the questionnaire items against each of the variables and modifying measurement instruments accordingly based on target respondents' opinion.

Scale developers often provide evidence of content validity by computing a Content Validity Index (CVI), using ratings of item relevance by content experts (Polit and Beck, 2006). The validity of the study content was achieved by administering 12 randomly selected items of the research findings to 5 experts in the field of compulsory land acquisition for relevance ratings using a 5-point rating scale, where; scales 4-5=Strong relevance, 2-3=Moderate relevance and 1=Weak relevance. The content validity was achieved with an acceptable scale Content Validity Index (CVI) value of 0.93 ass it lies above 0.8 (Shi et. al., 2012) using equation (3.4).

$CVI = x/y$……...Equation (3.4).

Where; CVI is the Content Validity Index, *x* is the total relevance ratings achieved (56) and *y* is total possible ratings of 60 (5 experts times 12 items).

Validity of research findings is determined by implementing the findings on a small-scale land acquisition project then extending to large scale land acquisition.

3.14 Measurement of variables

The variables of the study such as fixed choice response formats in relation to attitudes and opinions was measured using the five-point Likert scale as 1=strongly disagree, 2=Disagree, 3=Not Sure, 4=Strongly agree and 5=Agree.

3.15 Ethical Considerations

The study was carried out as a requirement for the award of Master of Science in Construction Technology and Management degree of Kyambogo University. It was in no way an appraisal of the study population but for academic purposes and therefore, all information obtained has been treated with confidentiality and used only for the purpose intended. To achieve the required confidentiality, identities of respondents were not recorded in the questionnaires.

CHAPTER FOUR

RESULTS PRESENTATATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents analysed results and discussion from the field and reviewed literature findings. The analysis was done using Statistical Package for Social Scientist (SPSS 25.0) and Microsoft Word Excel software and is hereby presented under the different sections in form of graphs, tables, and pie-charts.

4.2 Results presentation, analysis, and discussion

The analysis of data obtained was done using Statistical Package for Social Scientist (SPSS 25.0) where scores were coded and responses for the 167 respondents entered and subjected to statistical analysis.

In objective 1, the various land acquisition processes were assessed for their implementation and relevance and weights attached to the responses and their relative importance in the overall processes computed using RII to aid in identifying and eliminating from the loop any irrelevant process that would cause delays.

In analysis of objective 3, the contribution of each of the challenges to overall land acquisition processes obtained through literature and reviews of the land acquisition guiding legal frameworks (objective 2) were examined and the ranking of the attributes in terms of their criticality as observed by the respondents was done by use of Relative Importance Index (RII) which was computed using Equation 3.1 (section 3.10) which was customised in a Microsoft Word Excel document and the results of the analysis are presented in tabular form.

In analysis of objective 4, the contribution of each of the feasible solutions to addressing the overall land acquisition challenges obtained through literature reviews were examined and the ranking of the attributes in terms of their criticality as observed by the respondents was done by use of Relative Importance Index (RII) which was computed using Equation 3.1 (section 3.10) which was customised in a Microsoft Word Excel document and the results of the analysis are presented in tabular form.

4.3 Characteristics of respondents

Respondents such as valuation surveyors, land surveyors, sociologists and PAPs were targeted and responded to the questionnaires designed to facilitate the evaluation of the land acquisition processes and ranking of the challenges in land acquisition and the identified feasible solutions. The distributions by their category, gender, educational level and level of experiences are described in the subsequent sub-sections.

4.3.1 Category of respondents

The respondents' distribution according to their categories is summarised in Figure 4.1 with the PAPs forming the largest proportion represented by 79% of the total achieved 167 respondents. The second largest category of respondents was the Valuation surveyors at 10.2% followed by land surveyors at 8.4% and lastly the sociologists representing 2.4%. In the entire study, the PAPs formed the majority respondents due to the numerous properties they own alongside the road project and this could also be due to numerous affected persons in a single household. Valuation surveyors, land surveyors and sociologists are limited in terms of professionals and partly as they are distributed and handling land acquisition for other projects.

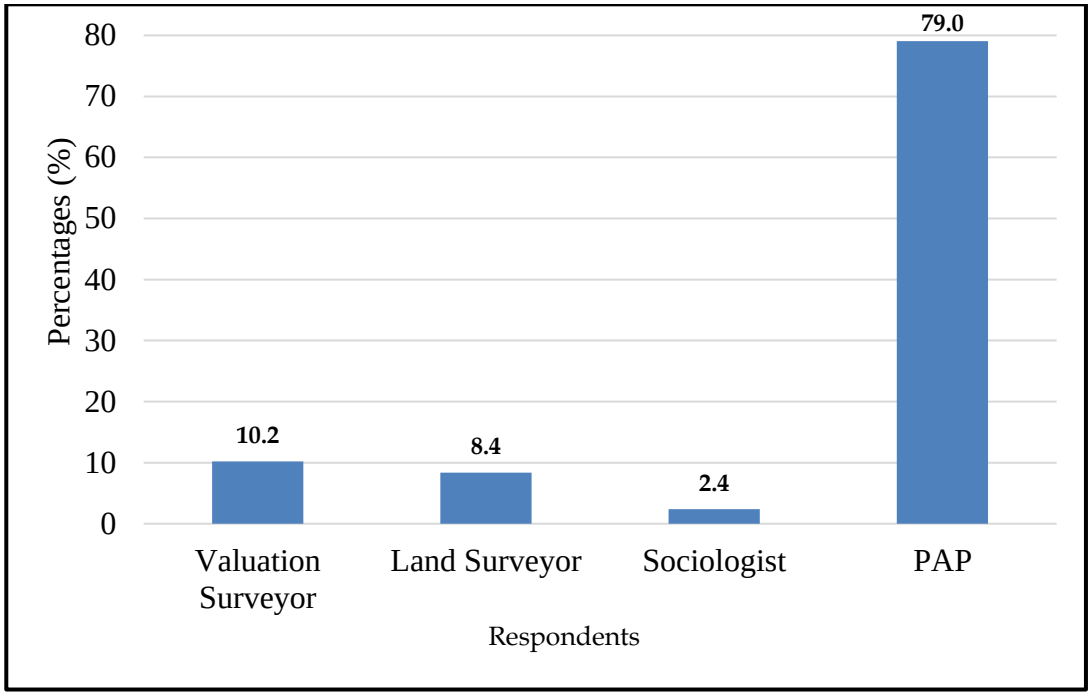

Figure 4.1 Category of respondents

Source; primary data

4.3.2 Gender of respondents

The respondent's distribution according to their gender is summarised in Figure 4.2 with the male forming the largest proportion represented by 57% and female 43% of the total achieved 167 respondents. This indicates a variation in the proportion of male and female regarding land related discussions and partly due to men being the heads of the majority households who own and register for compensation payments.

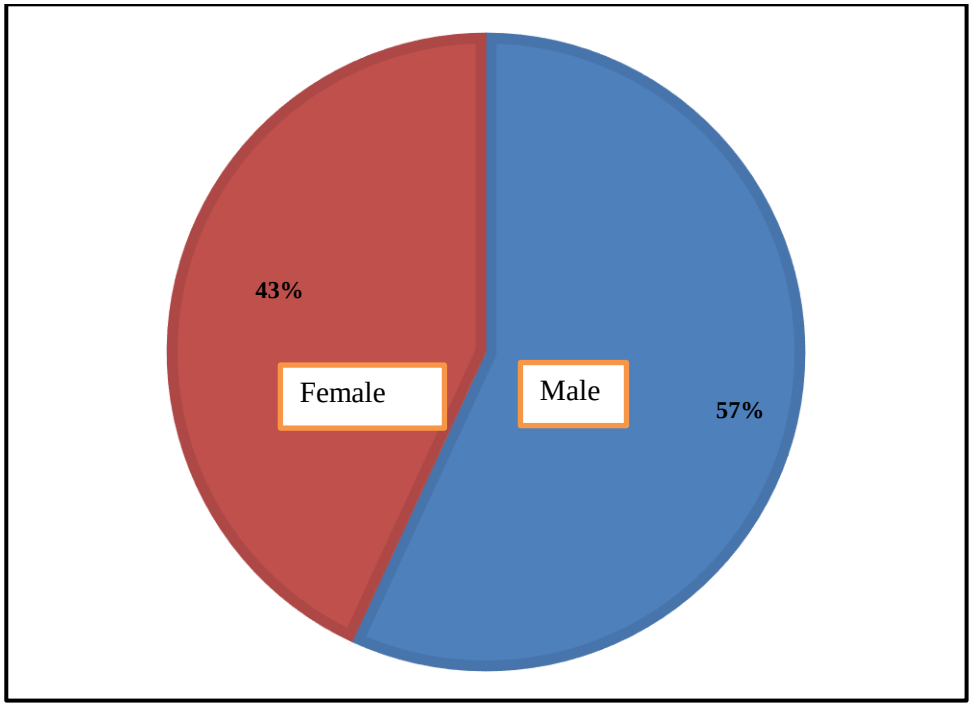

Figure 4.2 Gender of respondents

Source; primary data

4.3.3 Education levels of respondents

The respondents' distribution according to their education level is summarised in Figure 4.3 whereby others (pre-primary and primary school levels) formed majority respondents at 36.5%, 21.6% had attained a certificate or diploma level, 25.1% Bachelor's degree holders, 9.6% and 7.2% post graduate diploma and master's degrees respectively. The study established that, the quality of education and awareness of land rights are directly proportional, which makes it most likely for the highly educated to dispute compensation awards.

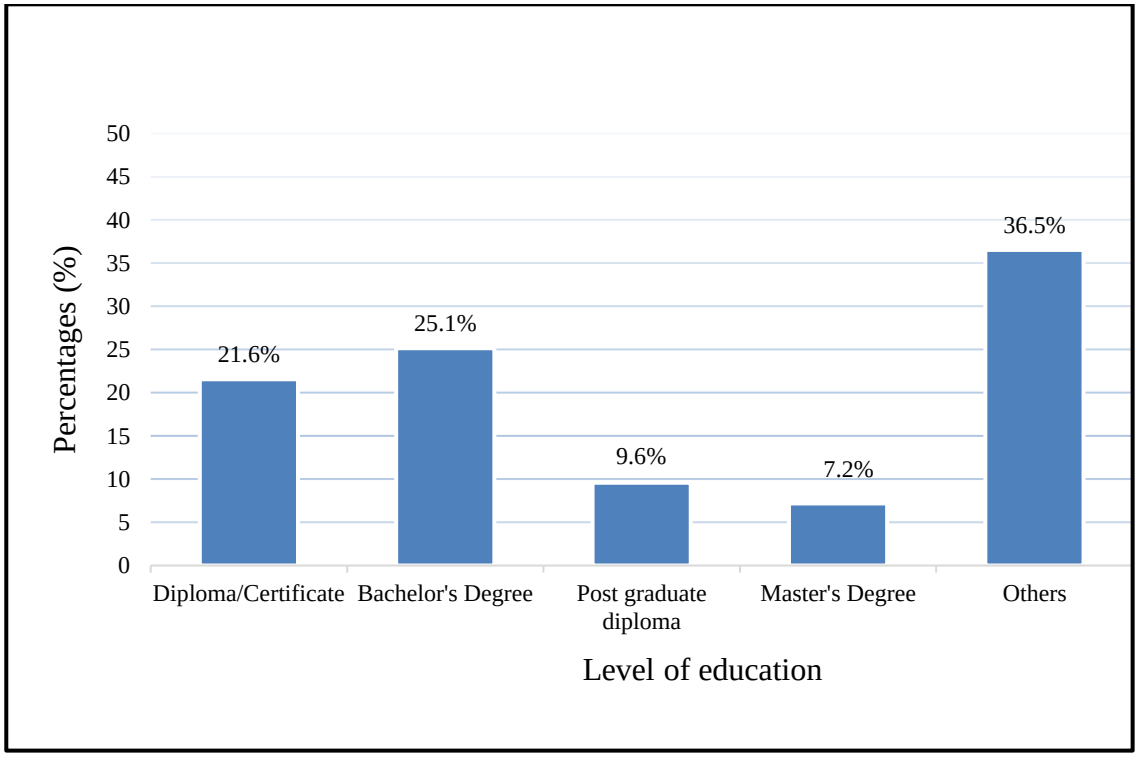

Figure 4.3 Level of education of respondents

Source; primary data

4.3.4 Years of experience in land acquisition

The respondents' distribution according to their years of experience in land acquisition is summarised in Figure 4.4 comprising of valuation surveyors, land surveyors and the sociologists. Most of the respondents were officers who had experience in land acquisition practices between 1-5 years which formed 79.6% of the respondents with 20.4% being the most experienced categories of land acquisition officers interviewed having practiced between 6-10 years. There were no categories of respondents obtained with years of practice less than 1 and above 10 during the study. The relatively great level of experience of the land acquisition officers aided in generating technical responses based on experience regarding the land acquisition processes, the challenges faced in the land acquisition processes and the feasible

solutions required to address the highlighted challenges. The findings further reveals that, whereas compulsory land acquisition practices has existed for more than 10 years in Uganda, there is a challenge of limited number of highly experienced professionals (over 10 years) involved in the land acquisition processes for road construction projects either due to the strenuous exercises involved, specialization in other fields of valuation or lack of interest in compulsory land acquisition practices.

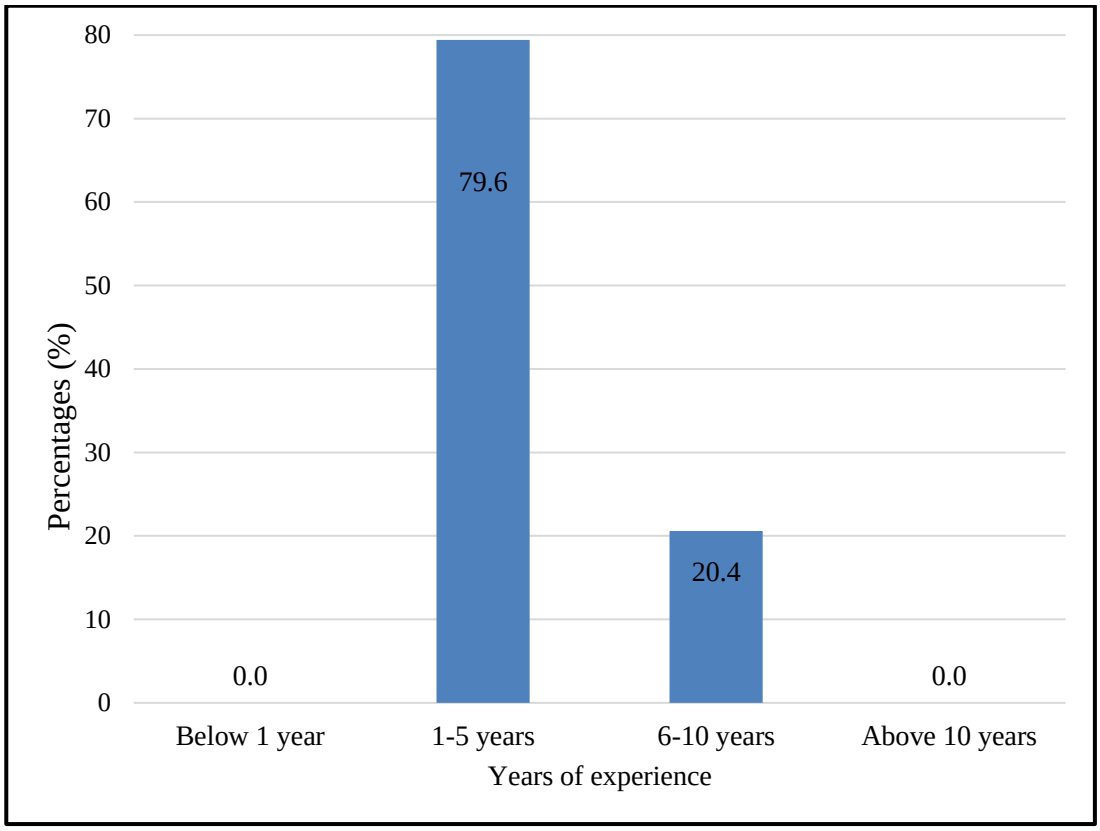

Figure 4.4 Years of practice of respondents

Source; primary data

4.4 Findings on evaluation of the land acquisition processes

The various land acquisition processes (Table 4.1) from B1 (Declaration by the Minister of the need for land) to B18 (Post compensation and resettlement livelihood

evaluation exercise) were coded and the respondents output indicated that, majority of the processes were implemented except B4 (Pre-acquisition and resettlement livelihood assessments), B16 (Subdivisions of registered land) and B18 (Post compensation and resettlement livelihood evaluation exercise).

Table 4.1 Land acquisition processes evaluated

Land acquisition processes
B1 Declaration by the Minister of the need for land
B2 Serving notices of acquisition in a gazette
B3 Reconnaissance visit by the acquisition team
B4 Pre-acquisition and resettlement livelihood assessments
B5 Community/stakeholder engagement and sensitisation
B6 Preparation of project land acquisition methodology
B7 Survey and valuation data capture
B8 Preparation of the survey maps and valuation rolls by assessment officers and the supervisors.
B9 Display of the strip maps and return of assessment forms to PAPs
B10 Review of the draft strip maps and valuation rolls by the Chief Government Valuer
B11 Field validation by the Chief Government Valuer and final report approval
B12 Pre-Identification, Verification and Disclosure sensitization engagements.
B13 Identification, Verification and Disclosure exercises
B14 Preparation of payment schedules for submission to the payment department
B15 Fresh surveys of untiled plots
B16 Subdivisions of registered land
B17 Processing title for the acquired land
B18 Post compensation and resettlement livelihood evaluation exercise.

Source; primary data

A total of 18 land acquisition processes were evaluated and from the study, little has been done regarding pre-acquisition and post compensation livelihood evaluation studies to enable understanding as to whether the affected persons by the road

construction project has been left worse of or with a better state of living as required by the legal frameworks. The limited involvement in sub-divisions of registered land could be due to the limited number of titled land parcels in the country.

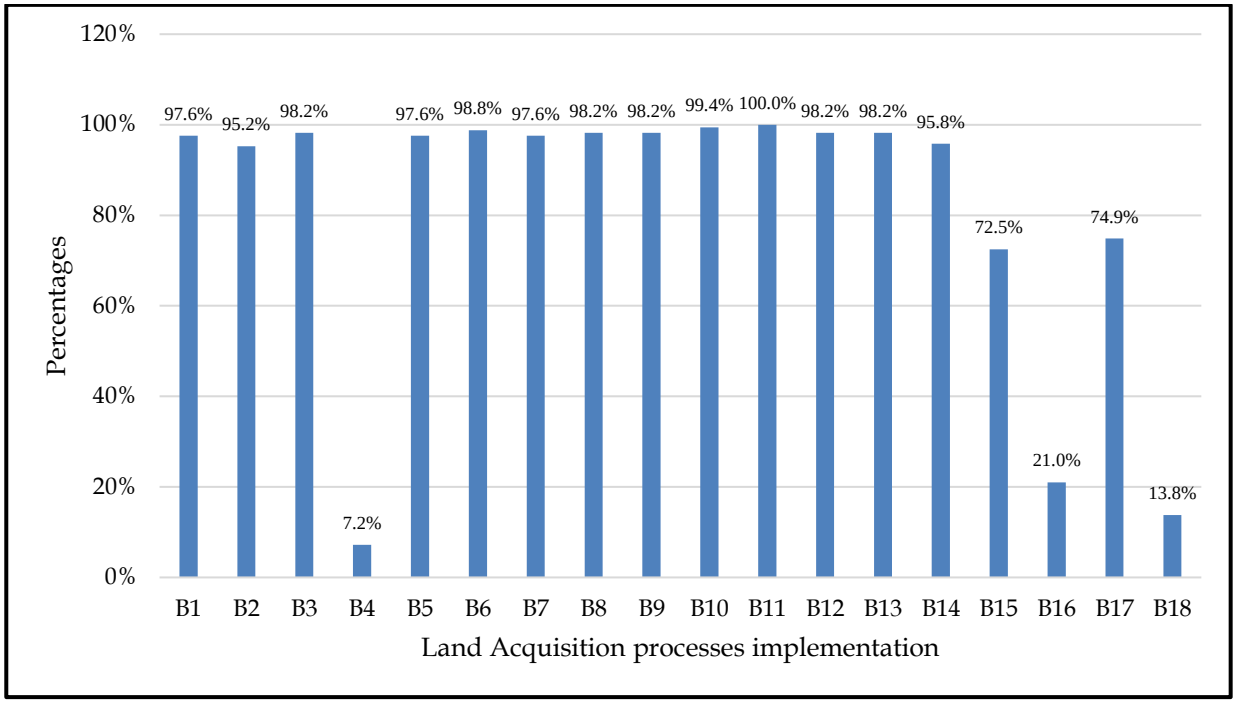

Figure 4.5 Land acquisition process implementation

Source; primary data

Furthermore, the respondents were tasked to evaluate the 18 processes by their relevancies in the overall land acquisition processes. The responses were coded and analysed and the RII of the evaluated processes computed. It was revealed that, pre-acquisition and resettlement livelihood assessments, subdivisions of registered land and post compensation and resettlement livelihood evaluation exercise were not relevant in the land acquisition processes as their RII fell way below the mean average RII of 0.719 of the overall processes.

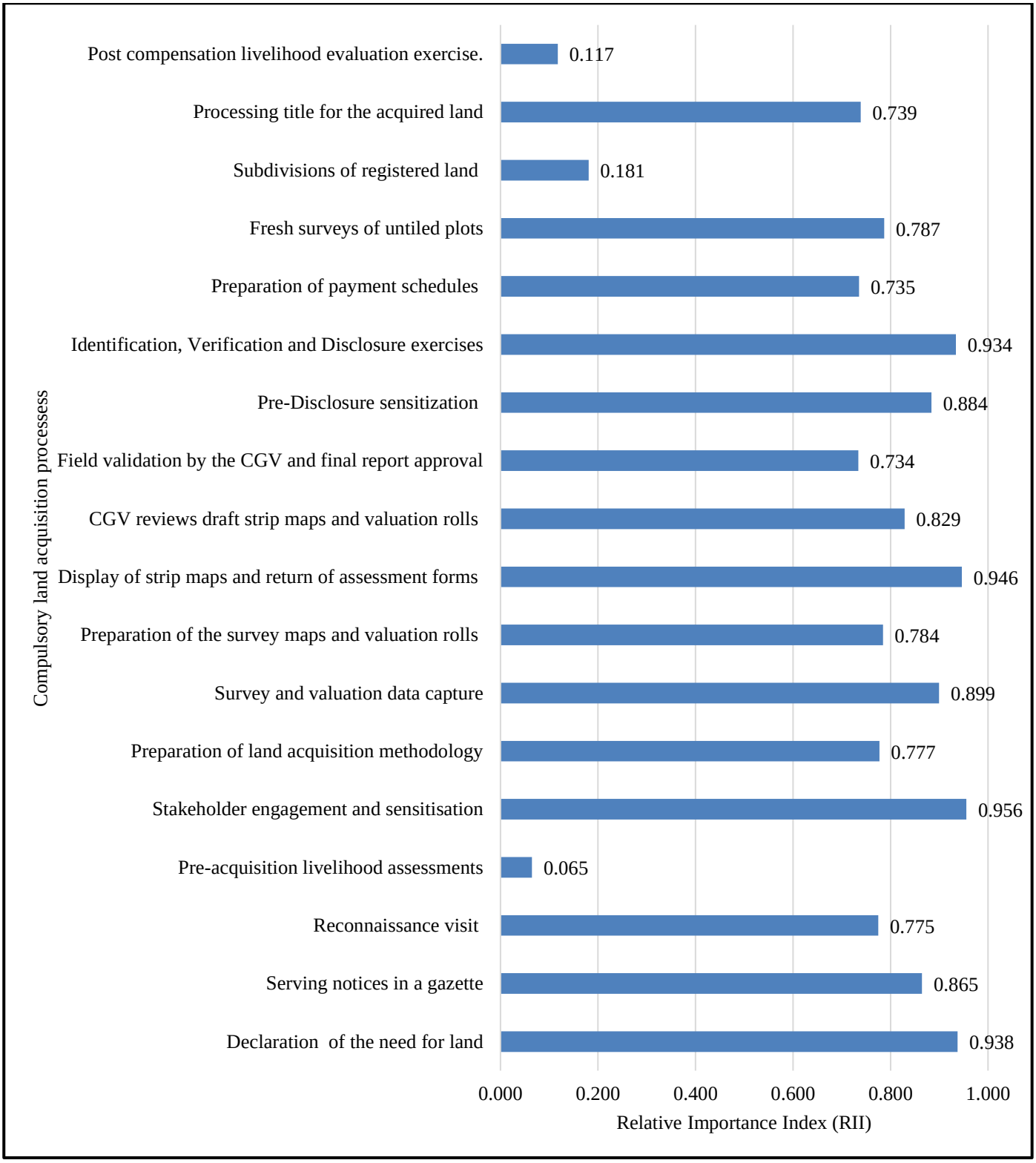

Figure 4.6 Land acquisition processes and their RII

Source; primary data

Interviews were conducted using the structured interview guides and whereas about 84% indicated their awareness of the processes of land acquisition, about 96% responded that the processes are in line with the set legal frameworks and therefore showing no need to review the legal frameworks as indicated by a 40% response. The respondents feared that review of the legal frameworks would cause tenure insecurity and corruption tendencies amongst other concerns, “the legal frameworks are satisfactory but it is the implementation which is a problem, so if reviewed we fear to lose our rights to land”, one of the local leaders asserted.

4.5 Findings on challenges in land acquisition processes in Uganda

A total of 29 challenges in land acquisition processes were drawn worldwide from reviewed literature and customised in the Ugandan perspective to determine which challenges have the greatest impact on the delays in the land acquisition processes. The challenges were coded, analysed and the RII for each computed, with delayed compensation awards the topmost ranked and thus a major challenge causing delays in land acquisition processes with a RII of 0.881 while insecurity ranked lowest with a RII of 0.307.

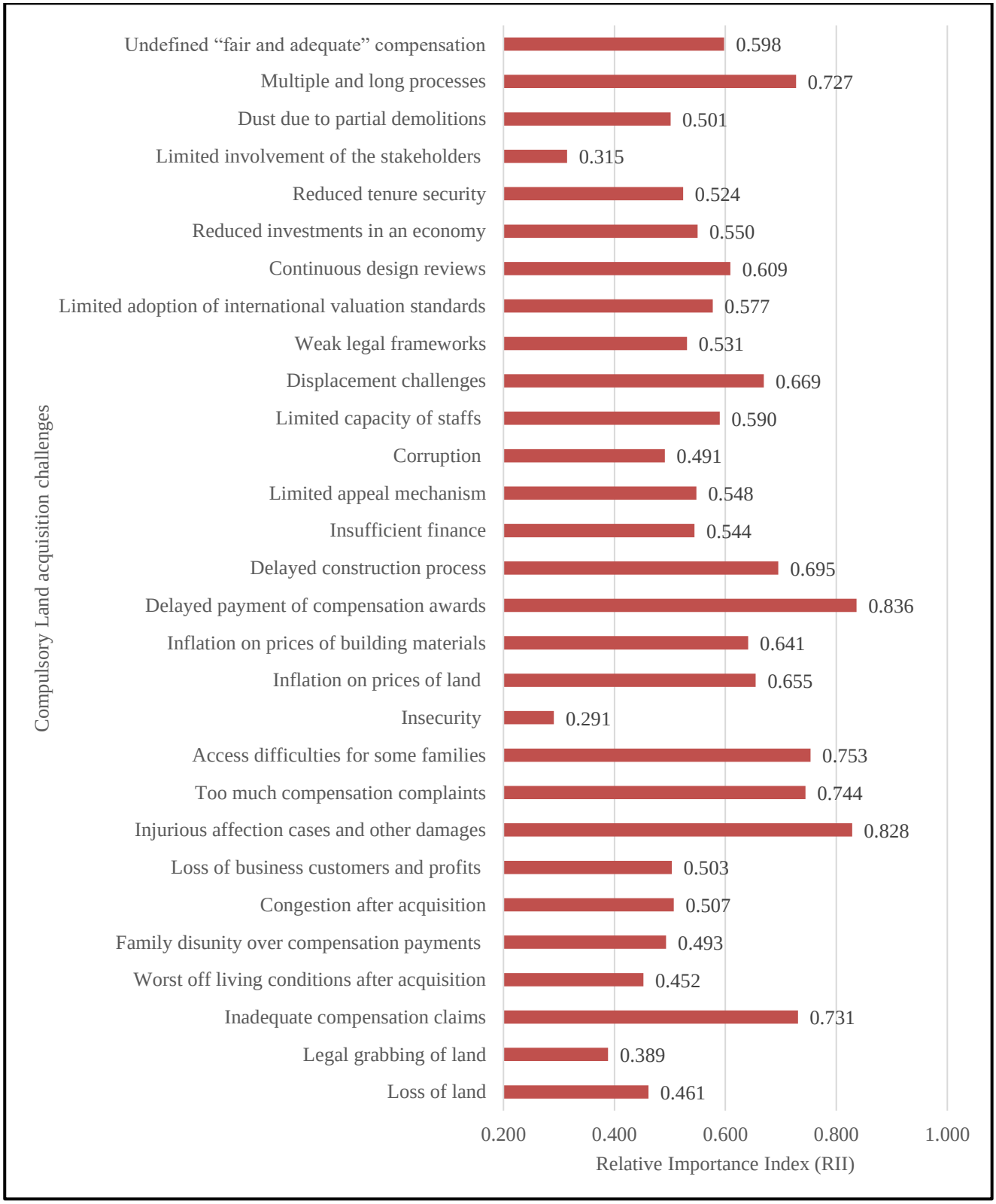

Figure 4.7 Challenges in land acquisition processes and their rankings

Source; primary data

The study established that, delayed payment of compensation awards (RII=0.881), injurious affection cases and other damages (RII=0.873), access difficulties for some families (RII=0.794), too much compensation complaints (RII=0.784) and inadequate compensation claims (RII=0.770) were the top five most significant challenges falling above the Mean RII of 0.609 that cause delays in compulsory land acquisition and therefore affecting the performance of road construction projects in Uganda. The least significant challenges that fall below the Mean RII of 0.609 affecting the performance of road construction projects include insecurity concerns (RII=0.307), delayed construction process (RII=0.332), conceptualising compulsory land acquisition as a legal grabbing of land (RII=0.410), worst off leaving condition after acquisition (RII=0.477) and loss of land by the affected persons (RII=0.486). The higher the RII value, the more significant the challenge and therefore the more effect it has on the performance of road construction projects.

The findings of this study are in close agreement with a study in Tanzania by Ndjovu (2016) which established that, inadequate compensations, non-adherence to the laws, unfavourable resettlement practices, use of force by governments and acquiring authorities in making PAPs accept compensation, and lack of PAPs' involvement in the acquisition processes were the most critical sources of discontent, all these challenges delays land acquisition and therefore negatively impact on the performance of road construction projects as the contractor cannot be given access to commence civil works.

Based on the interviews conducted, much as 96% of the respondents indicated that the land acquisition delays affect the performance of roads construction projects,

100% responses indicate that the challenges in the land acquisition processes can be overcome. This, therefore, recognises that the challenges faced can be addressed and the land acquisition processes fastened to avail land to the contractor on time to execute civil works.

These findings could be the justification for the failed attempt by the government to amend the Land Acquisition Act in 2018, which intended to give government access to land prior to compensation payments.

Figure 4.8 Section of road where the contractor was blocked from work at chainage 1+970-2+200

Source; primary data

4.6 Findings on land acquisition legal frameworks in Uganda

The land acquisition guiding legal frameworks were reviewed and the identified gaps presented in Table 4.2.

Table 4.2 Gaps in compulsory land acquisition guiding legal frameworks in Uganda

S/No	**Identified gaps in the legal frameworks guiding compulsory land acquisition in Uganda**
1	No clear definition of prompt, fair and adequate compensation
2	The discontented affected person is not awarded any compensation until disputes resolved
3	No clarity on the meaning and extent of "other kind of relocation assistance"
4	No court related subsidy provided for the aggrieved project affected persons
5	No separate special court created to handle cases of compulsory land acquisition
6	No distinction made in the law based on gender, age and or ethnic origin during compensation which triggers family disputes
7	There is no obvious provision for baseline information gathering and socio-economic surveys
8	The law is more focused on cash-based compensation and thus ignores land-based resettlement
9	No provision to cater for inflation on prices on peripheral land and building materials
10	The Roads Act only limits the extent of road reserve to fifty feet hampering the future requirement for roads expansion
11	There is no provision to cater for interest of persons who have predominantly occupied the reserve lands
12	Unconsolidated laws

Source; primary data

4.7 Strategies for addressing the challenges in land acquisition

A total of 18 strategies to address the land acquisition challenges drawn from literatures worldwide were assessed to evaluate the most feasible one and from the study, the coded responses were analysed and the RII of the various strategies computed. The strategy with the highest RII of 0.971 i.e. Regular involvement and dialoguing with the affected persons/stakeholders has been evaluated as the most

feasible one with the least ranked being “the need to amend the legal frameworks to allow for construction works in the event of discontent by the affected persons” with a RII of 0.408. Figure 4.9 shows the various strategies and their rankings.

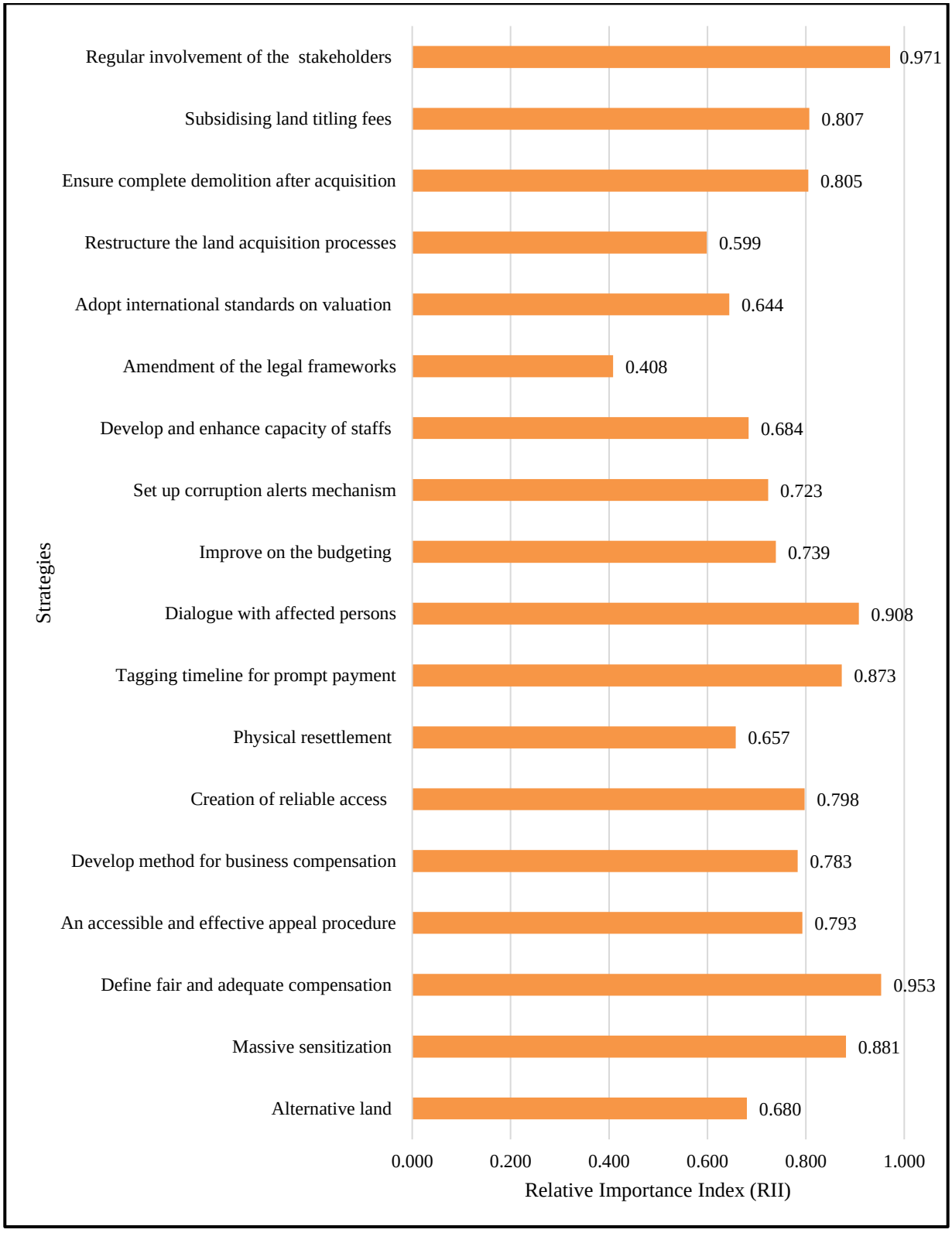

Figure 4.9 Strategies for addressing the land acquisition challenges and their RII

Source; primary data

Furthermore, interviews were conducted using the structured interview guides among the local leaders, project engineers, consultants and project managers and resultantly, the top five key strategic approaches to addressing the land acquisition challenges summarised and falling significantly above the mean RII value of 0.762 were; regular engagement and dialoguing with the affected persons (RII=0.971), proper definition and assessment of fair and adequate compensation (RII=0.953), dialogue with affected persons to allow construction progress (RII=0.908), massive sensitization on the need for compulsory land acquisition (RII=0.881) and ensuring prompt payment of compensation awards by tagging timeline (RII=0.873). The least significant feasible strategies in addressing the land acquisition challenges and falling below the mean RII value of 0.762 were; amendment of the legal frameworks to allow for construction works in the event of discontent by the affected persons (RII=0.408), the need to restructure the land acquisition processes (RII=0.599) and the need for adoption of international standards on valuation for compensation (RII=0.644). The higher the RII value, the more feasible the strategy is in addressing the challenges in compulsory land acquisition and therefore different stakeholders in the land acquisition process should adopt them to ensure that the performance of road construction projects in Uganda is enhanced through timely project completion and reduced cost such as in claims for idle machines.

4.8 Effects of the independent variables on the performance of road construction projects

An analysis was carried out to establish the relationship between the land acquisition process implementation, the land acquisition challenges, the feasible strategies and

the road construction project performance. The study revealed that, the land acquisition process implementations, land acquisition challenges and the various feasible strategies affects the performance of road construction projects as reflected by the positive gradient of linear equations and R^2 values of 0.951, 0.948 and 0.923 for the processes, challenges and feasible strategies respectively as shown in the Figures 4.7 to 4.10. The high R^2 values shows that there is a very strong relationship between the land acquisition processes implementation, land acquisition challenges, feasible strategies, and the road construction project performance.

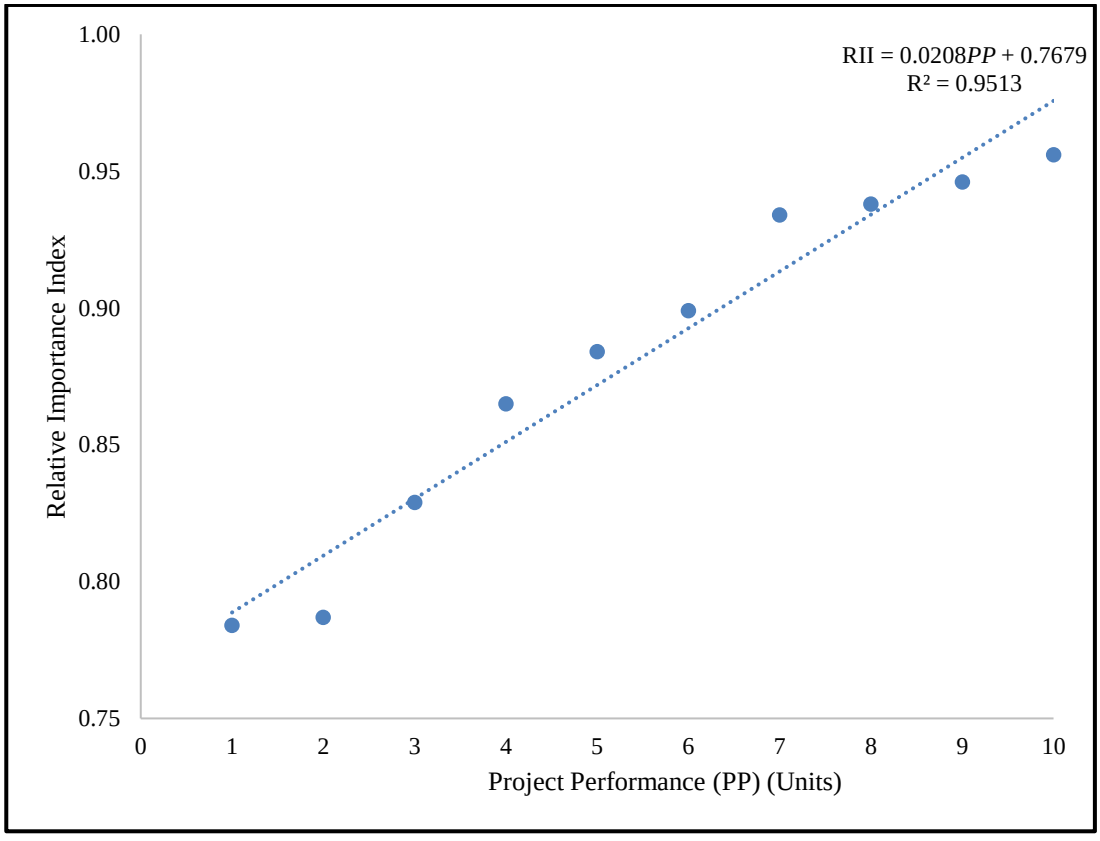

Figure 4.10 Effects of land acquisition process on construction project performance

Source; primary data

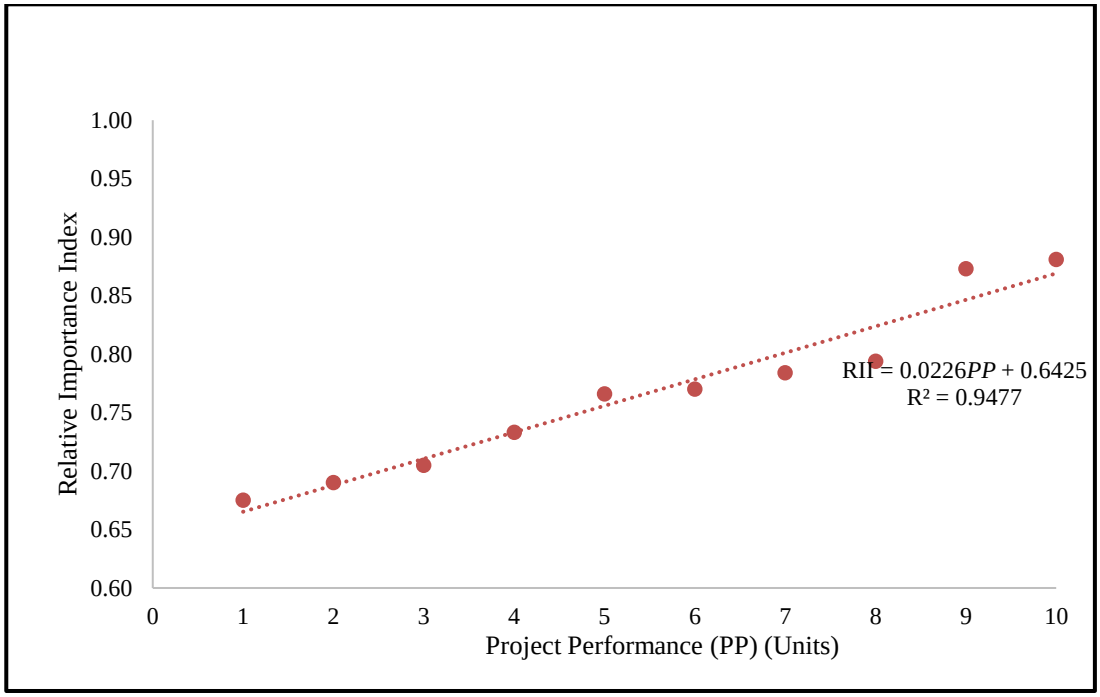

Figure 4.11 Effects of land acquisition challenges on construction project performance

Source; primary data

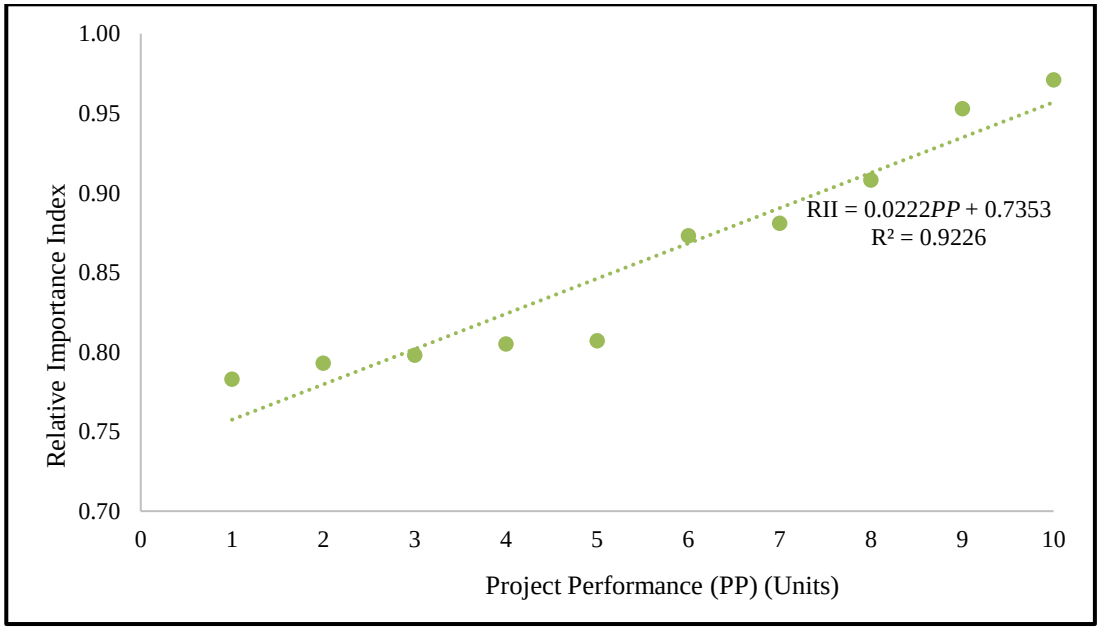

Figure 4.12 Effects of land acquisition feasible solutions to challenges on construction project performance

Source; primary data

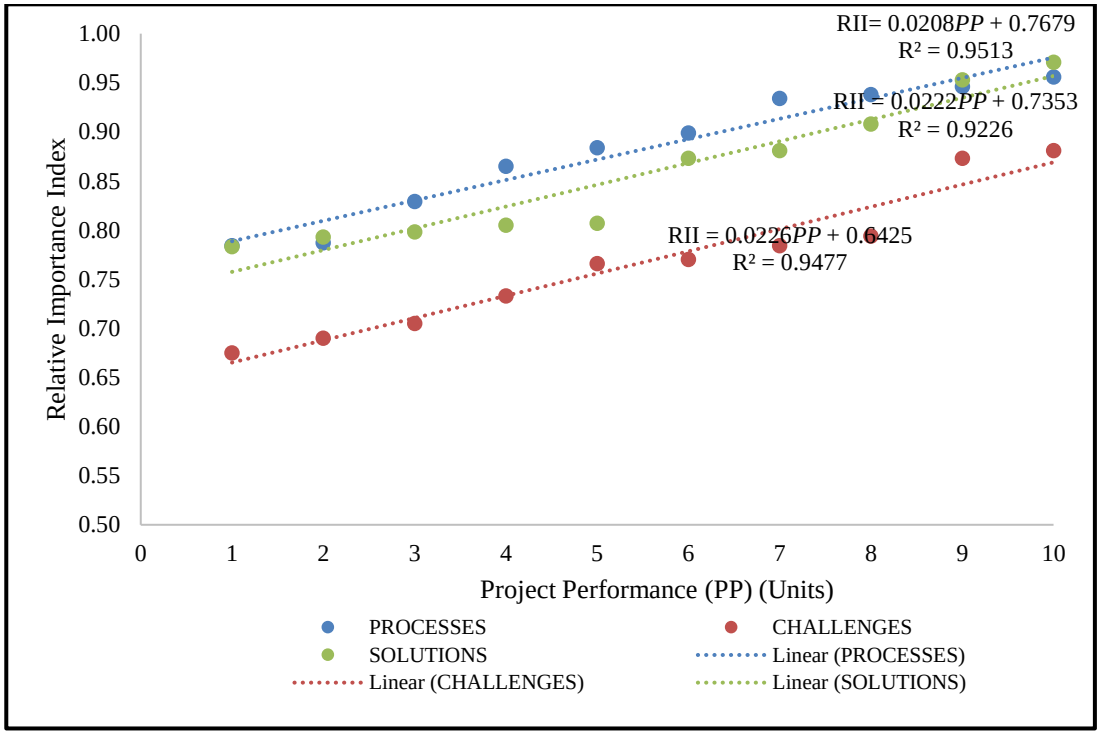

Figure 4.13 Effects of land acquisition processes, challenges, and feasible solutions to challenges on construction project performance

Source; primary data

From the above figures (intercepts), it can be established that, there are relatively high positive correlations between the independent variables (land acquisition processes, challenges, and feasible solutions to challenges) and the dependent variable (construction project performance). For example, faster implementation of highly ranked land acquisition processes would lead to an improvement on construction project performance.

4.9 Regression analysis

A tool that enables us to predict an individual's score on one variable based on knowing one or more other variables is regression analysis and as such, it involves determining the equation for the best-fitting line for a data set (Jackson, 2015).

An analysis to determine the source of variations was carried out at 95% confidence level and the analysis reveal that, there is a very high statistical variation significance within the variables since the p-value is much below 0.05 as shown in the ANOVA output in Table 4.3. Additionally, since F calculated (value=25.34) is greater than the F critical (value = 2.866), it shows that the overall regression model was significant. Conversely, if the significance value of F (<0.0001) were larger than 0.05 then the independent variables would not explain the variation in the dependent variable.

Table 4.3 ANOVA for source of variation

Source of Variation	SS	df	MS	F	*p*-value	F crit
Between Groups	174.4097	3	58.1366	25.34367	*p*<0.0001	2.8663
Within Groups	82.5814	36	2.2939			
Total	256.9911	39				

Source; Primary data

Table 4.4 ANOVA for significance

	df	SS	MS	F	Significance F
Regression	3	82.0182	27.3394	340.4503	<0.0001
Residual	6	0.4818	0.0803		
Total	9	82.5000			

Source; Primary data

A regression model for the statistical significance comparison between the land acquisition processes, the challenges and feasible solution was developed and presented using the multiple comparison table. The findings indicate that the land

acquisition challenges are insignificant in the overall regression model since the *p*-value is greater than the recommended 0.05, as the lower the *p*-value, the greater the significance of the factors (Gibson & Pratt, 1975).

Table 4.5 Two-way ANOVA regression model

	Coefficients	*Standard Error*	*t Stat*	*p-value*	*Lower 95%*	*Upper 95%*
Intercept	-33.7321	1.4632	-23.0532	p<0.0001	-37.3125	-30.1517
PROCESSES	23.3493	3.8960	5.9931	p>0.0001	13.8161	32.8825
CHALLENGES	9.7204	5.3275	1.8246	p>0.0001	-3.3154	22.7562
SOLUTIONS	13.0388	4.5047	2.8945	p>0.0001	2.0162	24.0614

Source; Primary data

From the above regression findings, the substitution of the regression formula; $PP = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ becomes,

$$\boldsymbol{PP = -33.7321 + 23.3493 X_1 + 9.7204 X_2 + 13.0388 X_3 + \varepsilon} \quad \text{.....Equation (4.1)}$$

Where; *PP* is the dependent variable (performance of road construction projects), X_1 is the land acquisition processes, X_2 is land acquisition challenges, X_3 is solutions to the land acquisition challenges and ε is the error term.

Based on the above equation, when all the independent variables factors are held constant at zero, the performance of road construction projects will be -33.7321. The negative output indicates the existing challenges such as dust, potholes, inaccessible roads etc, that road users experience prior to commencement of civil works for upgrading such roads. The data summary also shows that, for every unit increase in each of the independent variables, there is an expected 12.8760 increase in the performance of road construction projects. The land acquisition processes has the highest influence on the performance with a coefficient of 23.3493 followed by

challenges with a coefficient of 9.7204 and finally Solutions with coefficient of 13.0388 implying that more focus should be given to the faster implementation of the highly relevant land acquisition processes (Table 4.2) for a more enhanced road construction project performance.

4.10 Correlation analysis

A correlation method is used to assess the degree of relationship between two variables, and the coefficients varies between -1 to +1. A negative relationship between tow variables indicates that, an increase in one variable is accompanied by a decrease in the other variable while, a positive relationship implies an increase in one variable is accompanied by an increase in the other variable (Jackson, 2015).

A 2-Tailed correlation analysis was carried out since the researcher expected to find differences between the groups but was unsure what the differences would be. The analysis was carried out at 0.01 significance level between the land acquisition processes, challenges, the feasible solutions, and the construction project performance. This was because the researcher was willing to accept a risk of making Type 1 errors of up to 10% as highlighted by Jackson (2015).

The study established that, there exist a very strong positive connection between the land acquisition processes, challenges and feasible solutions thus indicating that, there exist challenges in the land acquisition processes implementation that can be solved to enhance performance of the road construction projects.

Table 4.6 Correlation analysis

		PERFORMANCE	*PROCESSES*	*CHALLENGES*	*SOLUTIONS*
PERFORMANCE	Pearson Correlation	1.0000			
PROCESSES	Pearson Correlation	0.9754	1.0000		
CHALLENGES	Pearson Correlation	0.9735	0.9260	1.0000	
SOLUTIONS	Pearson Correlation	0.9605	0.8930	0.9535	1.0000
Correlation is significant at the 0.01 level (2-Tailed).					

Source; primary data

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents objectively aligned study conclusions and recommendations based upon the analysed findings from the field and the various literature reviewed.

5.2 Conclusions

Traditional project management practice emphasises addressing three major constraints to project success; cost, time, and quality. Land acquisition delays which has time and cost implications on road construction project is one of the major factors causing delays in the overall construction projects and whereas delays in land acquisition processes are inevitable, measures can be put to minimise them when the challenges are evaluated for their level of significance and feasible solutions in addressing the challenges analysed for the their level of positive impact in curbing the challenges to enable progress of road construction projects. The general objective of the study was to assess the challenges and effects of delays in compulsory land acquisition on the performance of road construction projects in Uganda. Using Mbale-Bumbobi-Bubulo-Lwakhakha Road as a case study area, four objectives were investigated based on field data collected and the relevant literatures reviewed. The study generally established that delays in compulsory land acquisition, which is one of the causes of cost claims by the contractors negatively impacts on the construction time and cost that is, the more the delays in handing over land to the contractor, the more time the construction processes are deferred with consequential claims by the

project contractors for idle machine due to non-performance of civil works. The claimable amounts per day due to land acquisition challenges work delays averages 30% of 0.05% of the total accepted contract sum.

5.2.1 Conclusions on compulsory land acquisition processes

From the study findings, the following conclusions can be drawn regarding the land acquisition processes in Uganda.

- There is great awareness of the public about the processes of land acquisition for road construction projects in Uganda.
- The land acquisition processes are in line with the set legal frameworks and therefore no need to review.
- The land acquisition processes are too long and therefore, implementations of the overall processes take time and thus delays in land acquisition and civil works for road construction projects.
- Some of the land acquisition processes are insignificant for example pre-acquisition and resettlement livelihood assessments, subdivisions of registered land and post compensation and resettlement livelihood evaluation exercise.

5.2.2 Conclusions on compulsory land acquisition legal frameworks

From the study findings, the following conclusions can be drawn regarding the land acquisition legal framework in Uganda.

- There are significant loopholes in the legal framework that need to be clearly resolved for example a clear definition of what constitute prompt, fair and

adequate compensation and this has resulted into baseless claims of undervaluation claims causing delays in compulsory land acquisition.

- The land acquisition legal framework is not consolidated, with so many Acts in place influencing the land acquisition procedures.
- There is no amount whatsoever awarded to a discontented person to enable relocation as court takes effect to enable access to land by the contractor for civil works.
- There are no special established cost-effective court procedures to handle cases of discontented project affected persons which causes delays in litigations and thus delaying access to land by the contractors.

5.2.3 Conclusions on challenges in compulsory land acquisition

From the study findings, the following conclusions can be drawn regarding the land acquisition challenges in Uganda.

- There are various challenges experienced in the land acquisition processes which causes delays.
- The various challenges have different levels of significance based on the RII computed and therefore, challenges with higher RII are more significant in causing land acquisition delays and thus affecting the performance of road construction projects in Uganda.
- The land acquisition challenges can be minimised, and land availed to the contractor for civil works and this enhances the performance of road construction projects in Uganda.

5.2.4 Conclusion on feasible solutions to land acquisition challenges

From the study findings, the following conclusions can be drawn regarding the feasible solutions to land acquisition challenges in Uganda.

- There are various mitigation measures that can be adopted to address the challenges in the land acquisition processes.
- The various mitigation measures have different levels of significance based on the RII computed and therefore, feasible solutions with higher RII are more significant in addressing land acquisition challenges to enhance the performance of road construction projects in Uganda.

5.3 Recommendations

The following recommendations can be drawn based on the study findings;

5.3.1 Recommendations on compulsory land acquisition processes

- The land acquisition processes should not be reviewed but rather timely implemented.
- Some of the processes should be merged and implemented as a single process for example; reconnaissance visits should extend to cover stakeholder engagements and pre-identification, verification and disclosure sensitization engagements can be carried out while also undertaking the actual identification, verification and disclosure exercises.

5.3.2 Recommendations on compulsory land acquisition legal frameworks

- Proper definition and assessment of fair and adequate compensation needs to be invoked into the land acquisition legal frameworks. This can form a basis of assessment to reduce on the complaints of inadequate compensation.
- The legal framework guiding the compulsory land acquisition in Uganda should be consolidated into a single law.
- A special court should be established under the legal framework to specifically handle compulsory land acquisition related cases to enable faster conclusion of cases and access to land for civil works by the contractors.

5.3.3 Recommendations on challenges in compulsory land acquisition processes

- More emphasis should be put towards addressing the most significant challenges such as delayed payments of compensation awards and cases of injurious affections as their persistence will lead to more cost claims and time extensions by the contractors.

5.3.4 Recommendations on feasible solutions to challenges in land acquisition processes

- More emphasis should be put in ensuring regular involvement and dialoguing with the affected persons/stakeholders in the land acquisition processes.
- Dialogue with affected persons to allow for construction progress. This can be practical where the landowners are not yet compensated especially in undeveloped stretches of land.

- Civil works should commence after the completion of the land acquisition processes to ensure uninterrupted works such as blockages by the affected persons due to delayed compensations.
- The government should ensure massive sensitizations are carried out to justify on the need for compulsory land acquisition and to educate people about their rights to property.
- Prompt payment of compensation awards by tagging timeline to the land acquisition processes. Funds could be reserved and made available to compensate the affected persons once they have consented to the approved compensation award.
- Creation of reliable access after acquisition and road construction works for the affected persons to reach their homes.

5.3.5 Recommendations on further areas of study

From the study conclusions above, the following areas are recommended for further studies;

- Impact of stakeholder's engagement during compulsory land acquisition processes on the performance of road construction projects.
- A quantitative assessment of the causes and effects of construction claims on the performance of road construction projects in Uganda.

REFERENCES

Ablo, A.D. and Asamoah, V.K., (2018). Local participation, institutions and land acquisition for energy infrastructure: The case of the Atuabo gas project in Ghana. *Energy research & social science*, *41*, pp.191-198.

Bello, N.A. and Olanrele, O.O., (2016). Value gap in Nigerian property compensation practice: measurement and economic effects. *Pacific Rim Property Research Journal*, *22*(2), pp.101-113.

Aliaga, M. and Gunderson, B., (1999). *Interactive statistics*. Prentice Hall.

Alias, A. and Nasir Daud, M.D., (2006). Payment of adequate compensation for land acquisition in Malaysia. *Pacific Rim Property Research Journal*, *12*(3), pp.326-349.

Asamoah, P.K., (2012). Government's compulsory land acquisition and the right to property: the case of mining communities in Ghana (Master's thesis).

Bujang, M. A., & Baharum, N. (2017). Guidelines of the minimum sample size requirements for Kappa agreement test. Epidemiology, *Biostatistics and Public Health*, 14(2).

Borras Jr, S.M. and Franco, J.C., (2012). Global land grabbing and trajectories of agrarian change: A preliminary analysis. *Journal of agrarian change*, *12*(1), pp.34-59.

Chan, A.P.C and Chan, A.P.L., (2004). Key performance indicators for measuring construction success. *Benchmarking: An International Journal*. Emerald Group Publishing Limited, 11(2), pp. 203–221. doi: 10.1108/14635770410532624.

Cotula, L., (2012). The international political economy of the global land rush: A critical appraisal of trends, scale, geography, and drivers. *The journal of peasant studies*, *39*(3-4), pp.649-680.

Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and psychological measurement*, *20*(1), 37-46.

Danso, H. and Manu, D., (2013). High cost of materials and land acquisition problems in the construction industry in Ghana. *International Journal of Research in Engineering & Applied Sciences*, *3*(3), pp.18-33.

Denscombe, M., (2014). The good research guide: for small-scale social research projects. *McGraw-Hill Education* (UK).

FAO, (2002). Land tenure and rural development. Rome: FAO, Rural Development Division. Fitzpatrick v The Coal Authority. 2001. LTS/COMP/2000/3 (Lands Tribunal for Scotland January 8, 2001).

Gangopadhyay, S., (2012). Developing the market for land. *Review of Market Integration*, *4*(2), pp.197-220.

Gibbons, J. D., & Pratt, J. W. (1975). P-values: interpretation and methodology. *The American Statistician*, *29*(1), 20-25.

Gündüz, M., Nielsen, Y. and Özdemir, M., (2013). Quantification of delay factors using the relative importance index method for construction projects in Turkey. *Journal of management in engineering*, *29*(2), pp.133-139.

Hertel, T.W., (2011). The global supply and demand for agricultural land in 2050: A perfect storm in the making?. *American Journal of Agricultural Economics*, *93*(2), pp.259-275.

International Valuation Standards Council, (2017). '*International Valuation Standards',* Available at: www.ivsc.org (Accessed: 4 April 2019).

Jackson, S. L. (2015). Research methods and statistics: A critical thinking approach. *Cengage Learning*.

King, R. and Sumbo, D.K., (2015). Implications of compulsory land acquisition and compensation in Ghana: a case study of land acquisition for the Suame-Buoho road reconstruction in Kumasi. *Journal of Science and Technology (Ghana)*, *35*(2), pp.100-113.

Kombe, W.J., (2010). Land acquisition for public use, emerging conflicts and their socio-political implications. *International Journal of Urban Sustainable Development*, *2*(1-2), pp.45-63.

Kotaka, T., Callies, D. and Guth, H., (2001). Taking Land: Compulsory Purchase and the Regulation of Land in Asia-Pacific Countries. *Asia Pacific Law Review*, *9*(2), pp.103-132.

Krejcie, R.V. and Morgan, D.W., (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), pp.607-610.

Larbi, W.O., (2008). Compulsory land acquisition and compensation in Ghana: Searching for alternative policies and strategies. In *International Seminar on State and Public Sector Land Management* (pp. 1-21).

Morris, T. and Wood, S., (1991). Testing the survey method: continuity and change in British industrial relations. *Work, Employment and Society*, *5*(2), pp.259-282.

Muhwezi, L., Acai, J. and Otim, G., (2014). An assessment of the factors causing delays on building construction projects in Uganda. *International journal of construction engineering and management*, *3*(1), pp.13-23.

Ndjovu, C., (2016). Understanding causes of dissatisfactions among compensated landowners in expropriation programs in Tanzania. *International Journal of Scientific and Technology Research*, *5*(1), pp.1-7.

Nguyen, P., van Westen, A. and Zoomers, A., (2017). Compulsory land acquisition for urban expansion: Livelihood reconstruction after land loss in Hue's peri-urban areas, Central Vietnam. *International Development Planning Review*, *39*(2), pp.99-122.

Patil, V. and Ghosh, R., (2017). Rehabilitation myths? How transaction costs reduce farmer welfare after land acquisition. *Journal of South Asian Development*, *12*(1), pp.1-17.

Pedlowski, M.A., (2013). When the state becomes the land grabber: violence and dispossession in the name of development in Brazil. *Journal of Latin American Geography*, pp.91-111.

PMI, S.C., (2008). A guide to the project management body of knowledge (PMBOK)(2008 ed.). *Newton Square, PA, USA (Project Management Institute)*.

Polit, D. F. and Beck, C. T. (2006) 'The content validity index: Are you sure you know what's being reported? Critique and recommendations', *Research in Nursing and Health*. *John Wiley & Sons, Ltd*, 29(5), pp. 489–497.

Rithmire, M.E., (2017). Land institutions and Chinese political economy: Institutional complementarities and macroeconomic management. *Politics & Society*, *45*(1), pp.123-153.

Rao, J., Tiwari, P. and Hutchison, N.E., (2018). No Way to Say No: Stakeholder analysis for compulsory purchase for public infrastructure project in Australia. *Property Management* Emerald Publishing Limited, 36(1), pp. 37–66.

Rao, J., Tiwari, P. and Hutchison, N.E., (2017). Capability approach to compulsory purchase compensation: evidence of the functionings of land identified by affected landowners in Scotland. *Journal of Property research*, *34*(4), pp.305-324.

Robertson, B. and Pinstrup-Andersen, P., (2010). Global land acquisition: neo-colonialism or development opportunity?. *Food Security*, *2*(3), pp.271-283.

Shankar, D., (2018). Contested lands and contentious lines: Land acquisition for the railways in late nineteenth and early twentieth-century Delhi. *The Indian Economic & Social History Review*, *55*(4), pp.491-513.

Shi, J., Mo, X. and Sun, Z., (2012). Content validity index in scale development. *Zhong nan da xue xue bao. Yi xue ban Journal of Central South University. Medical sciences*, *37*(2), p.152.

Stichler, J.F. and Hamilton, D.K., (2008). Theoretical and conceptual frameworks in research and practice. *HERD: Health Environments Research & Design Journal*, *1*(4), pp.4-6.

Tagliarino, N.K., Bununu, Y.A., Micheal, M.O., De Maria, M. and Olusanmi, A., (2018). Compensation for expropriated community farmland in Nigeria: An In-Depth analysis of the laws and practices related to land expropriation for the Lekki free trade zone in Lagos. *Land*, *7*(1), p.23.

Tagliarino, N.K., (2017). The status of national legal frameworks for valuing compensation for expropriated land: An analysis of whether national laws in 50 countries/regions across Asia, Africa, and Latin America comply with international standards on compensation valuation. *Land*, *6*(2), p.37.

Takim, R. and Akintoye, A., (2002). September. Performance indicators for successful construction project performance. In *18th Annual ARCOM Conference* (Vol. 2, pp. 545-555).

Ty, P.H., Van Westen, A.C.M. and Zoomers, A., (2013). Compensation and resettlement policies after compulsory land acquisition for hydropower development in Vietnam: policy and practice. *Land*, *2*(4), pp.678-704.

Uganda, (1995). Constitution of the Republic of Uganda. *Uganda Print and Publishing Corporation.*

Uganda, (1965). Land Acquisition Act of the Republic of Uganda Cap. 226. *Uganda Print and Publishing Corporation.*

Uganda, (1998). Land Act of the Republic of Uganda Cap. 227. *Uganda Print and Publishing Corporation.*

Uganda National Roads Authority, (2019). Report to the Top Management on project performance and progress.

Yin, R.K., (2003). Case Study Research: Design and Methods 3rd Edition Sage. *Thousand Oaks*.

Zoomers, A., (2010). Globalisation and the foreignisation of space: seven processes driving the current global land grab. *The Journal of Peasant Studies*, *37*(2), pp.429-447.

Appendix 1: Sample size determination table

Appendix 2: Work plan

Activities Vs Months (2018/19)	**Dec.**	**Jan.**	**Feb.**	**Mar.**	**Apr.**	**May**	**June**	**July**	**Aug.**
Proposal writing, presentation, and approval	✓	✓							
Questionnaire design and testing	✓	✓							
Field data collection		✓	✓						
Data analysis and interpretation		✓	✓	✓	✓				
Final report writing				✓	✓	✓	✓	✓	✓
Publications, Binding and submission						✓	✓	✓	✓

Appendix 3: Budget estimates

S/No	Items	Costs (UGX.)
1	Typing, printing, photocopying, and binding	500,000
2	Transportation and accommodation	1,500,000
3	Feeding and refreshments during field research	1,000,000
4	Internet data	1,000,000
5	Miscellaneous (Research Assistants and other contingencies)	1,500,000
	TOTAL	**5,500,000**

Appendix 4: Questionnaire guide

QUESTIONNAIRE FOR SUVEYORS, VALUERS, SOCIOLOGISTS AND PAPS

Dear respondent,

This questionnaire is for the purpose of helping **Mr Elong Samuel** a graduate student of ***Master of Science in Construction Technology and Management*** of Kyambogo University to obtain information that will assist him to write a research dissertation that is a partial requirement for this course. It is **NOT** meant for any other purpose and therefore, information provided herein will be kept with utmost confidentiality. You are therefore kindly requested to cooperate in answering the questions honestly to provide the required information. The topic of study is "**AN ASSESSMENT OF THE CHALLENGES AND EFFECTS OF DELAYS IN COMPULSORY LAND ACQUISITION ON THE PERFORMANCE OF ROAD CONSTRUCTION PROJECTS IN UGANDA"** Thank you.

A. CHARACTERISTICS OF RESPONDENTS *(Please tick where applicable*)

1. Under which category do you fall?

1. Valuation surveyor
2. Land surveyor
3. Sociologist
4. PAP

2. Gender

1. Male 2. Female

3. Your educational level;

1. Diploma/Certificate
2. Degree
3. Post graduate diploma
4. Master's Degree
5. Others specify _____

4. How long have you practiced land acquisition projects?

1. below 1year
2. 1 - 5 years
3. 6 - 10 years
4. above 11 years

B. LAND ACQUISITION PROCESS *(Please fill and rate where applicable*)

PROCESS NAME	PROCESS IMPLEMENTATION (1-Yes. 2-No)		THE PROCESS IS RELEVANT. (1-Strongly disagree 2-Disagree, 3-Not sure, 4-Agree, 5-Strongly agree)				
	1	2	1	2	3	4	5
B1 Declaration by the Minister of the need for land							
B2 Serving notices of acquisition in a gazette							
B3 Reconnaissance visit by the acquisition team							
B4 Pre-acquisition and resettlement livelihood assessments							
B5 Community/stakeholder engagement and sensitisation							
B6 Preparation of project land acquisition methodology							
B7 Survey and valuation data capture							
B8 Preparation of the survey maps and valuation rolls by assessment officers and the supervisors.							
B9 Display of the strip maps and return of assessment forms to PAPs							

B10 Review of the draft strip maps and valuation rolls by the Chief Government Valuer							
B11 Field validation by the Chief Government Valuer and final report approval							
B12 Pre-Identification, Verification and Disclosure sensitization engagements.							
B13 Identification, Verification and Disclosure exercises							
B14 Preparation of payment schedules for submission to the payment department							
B15 Fresh surveys of untiled plots							
B16 Subdivisions of registered land							
B17 Processing title for the acquired land							
B18 Post compensation and resettlement livelihood evaluation exercise.							

C. CHALLENGES EXPERIENCED IN LAND ACQUISITION PROCESS

(Please Rate)

Challenges in compulsory land acquisition	(1-Strongly disagree 2-Disagree, 3-Not sure, 4-Agree, 5-Strongly agree)				
	1	**2**	**3**	**4**	**5**
C1 Loss of land by the affected person					
C2 Land acquisition as a legal grabbing of land					

C3 Inadequate compensation claims					
C4 Worst off living conditions after acquisition					
C5 Family disunity over compensation payments					
C6 Congestion after acquisition					
C7 Loss of business customers and profits					
C8 Injurious affection cases and other damages					
C9 Too much compensation complaints					
C10 Access difficulties for some families					
C11 Insecurity					
C12 Inflation on prices of land					
C13 Inflation on prices of building materials					
C14 Delayed payment of compensation awards					
C15 Delayed construction process					
C16 Insufficient finance					
C17 Limited appeal mechanism					
C18 Corruption					
C19 Limited capacity of staffs to implement the processes					
C20 Displacement challenges					
C21 Weak legal frameworks					
C22 Limited adoption of international standards on valuation for compensation					
C23 Continuous design reviews					
C24 Reduced investments in an economy					

C25 Reduced tenure security					
C26 Limited involvement of the affected persons/stakeholders					
C27 Dust due to partial demolitions					
C28 Multiple and long processes					
C29 Undefined “fair and adequate” compensation					

D. STRATEGIES OF ADDRESSING THE CHALLENGES IN LAND ACQUISITION PROCESS *(Please list)*

Strategies	(1-Strongly disagree 2-Disagree, 3-Not sure, 4-Agree, 5-Strongly agree)				
	1	**2**	**3**	**4**	**5**
D1 Alternative land to the affected person					
D2 Massive sensitization on the need for compulsory land acquisition					
D3 Proper definition and assessment of fair and adequate compensation					
D4 Establish an accessible and effective appeal procedure					
D5 Develop an appropriate method for business compensation					
D6 Creation of reliable access after acquisition and project implementation for the affected persons					
D7 Physical resettlement to handle inflation challenges					
D8 Prompt payment of compensation awards by tagging timeline					
D9 Dialogue with affected persons to allow construction progress					

D10 Improve on the budgeting for compensation to affected persons					
D11 Set up corruption alerts and reporting mechanism					
D12 Develop and enhance capacity of staffs to implement the processes					
D13 Amendment of the legal frameworks to allow for construction works in the event of discontent by the affected persons					
D14 Adoption of international standards on valuation for compensation					
D15 Restructure the land acquisition processes					
D16 Ensure complete demolition after acquisition to deal with dust due to partial demolition					
D17 Subsidising land titling fees for the affected persons to strengthen tenure security					
D18 Regular involvement and dialoguing with the affected persons/stakeholders					

THANKS FOR YOUR TIME

Appendix 5: Interview guide

INTERVIEW GUIDE FOR THE LOCAL LEADERS, PROJECT MANAGERS, PROJECT ENGINEERS AND CONSULTANTS

Dear respondent,

This interview is for the purpose of helping **Mr Elong Samuel** a graduate student of ***Master of Science in Construction Technology and Management*** of Kyambogo University to obtain information that will assist him to write a research dissertation that is a partial requirement for this course. It is **NOT** meant for any other purpose and therefore, information provided herein will be kept with utmost confidentiality. You are therefore kindly requested to cooperate in answering the questions honestly to provide the required information. The topic of study is "**AN ASSESSMENT OF THE CHALLENGES AND EFFECTS OF DELAYS IN COMPULSORY LAND ACQUISITION ON THE PERFORMANCE OF ROAD CONSTRUCTION PROJECTS IN UGANDA"** Thank you.

A. BACKGROUND CHARACTERISTICS OF THE RESPONDENTS *(Please tick where applicable*)

1. Under which category do you fall?

1. Local leader
2. Project Manager
3. Project Engineer
4. Consultant

2. Gender

1. Male  2. Female 

3. Your educational level;

1. Diploma/Certificate
2. Degree
3. Post graduate diploma
4. Master's Degree
5. Others specify _____

4. How long have you known about compulsory land acquisition?

1. below 1year
2. 1 - 5 years
3. 6 - 10 years
4. above 10 years

5. Are you aware about the compulsory land acquisition processes?

1. YES  2. NO 

6. Do you think the implementation of compulsory land acquisition is in line with the legal frameworks guiding the processes?

1. YES  2. NO 

Why do you think so?

……

……

7. Do you think compulsory land acquisition affects the progress of construction projects?  

1. YES 2. NO

Why do you think so?

……

……

……

……

8. Should the land acquisition processes and legal frameworks be reviewed?

1. YES  2. NO 

Why do you think so?

……

……

……

9. Do you think compulsory land acquisition challenges can be overcome?

1. YES  2. NO 

How can the challenges be addressed?

……

……

……

……

THANKS FOR YOUR TIME